JUGONNATH SUNKERSETT
PRESENTATION.

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ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS, AND PLACES OF GROWTH.

TO WHICH WILL BE ADDED,

OCCASIONAL REMARKS.

BY

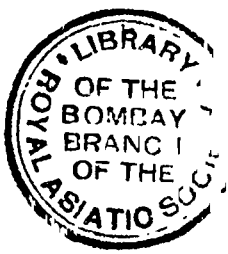
JAMES EDWARD SMITH, M.D. F.R.S.

MEMBER OF THE IMP. ACAD. NATURÆ CURIOSORUM, THE ACADEMIES OF STOCKHOLM, UPSAL, TURIN, LISBON, LUND, BERLIN, PHILADELPHIA, AND THE NAT. HIST. SOCIETY OF PARIS;

PRESIDENT OF THE LINNEAN SOCIETY.

THE FIGURES BY

JAMES SOWERBY, F.L.S.



——" VIRESQUE ACQUIRIT EUNDO."—— *Virg.*

55385

VOL. XXII.

LONDON:

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Oct.r 1.1818. Published by Jas Sowerby, London.

Oct.1.1808. Published by Jas. Sowerby, London.

THYMUS Serpyllum.

Wild Thyme.

DIDYNAMIA Gymnospermia.

GEN. CHAR. *Cal.* 2-lipped, its orifice closed with hair. Upper lip of the *corolla* flat, notched.

SPEC. CHAR. Flowers in small heads. Stems decumbent. Leaves flat, ovate, obtuse; fringed at the base.

SYN. Thymus Serpyllum. *Linn. Sp. Pl.* 825. *Sm. Fl. Brit.* 639. *Huds.* 262. *With.* 536. *Hull.* 133. *Relh.* 237. *Sibth.* 188. *Abbot.* 132. *Curt. Lond. fasc.* 2. *t.* 47.

Serpyllum vulgare. *Raii Syn.* 230.

WILD THYME clothes many a heath and hillock, in dry or gravelly countries, with its purple blossoms during the summer months. Its entangled branches form an elastic turf, and the bruised leaves when trodden upon diffuse a warm aromatic odour Bees frequent the flowers in great numbers. The flavour of mutton is supposed to be improved by the sheep feeding on this plant.

The roots are fibrous, perennial and creeping. Stems shrubby, slender, branched, procumbent, leafy, downy, often reddish. Leaves elliptic-ovate, flat, entire, obtuse, sprinkled with resinous dots, coarsely fringed at the base, as are also their footstalks throughout. Heads of flowers terminal, leafy. Flowers on shortish hairy stalks. Calyx ribbed, dotted, purple, most hairy underneath; its two lower teeth prominent, narrow and fringed; its mouth closed with dense white hairs. Corolla purple; lower lip variegated, deeply 3-cleft. Stamina divaricated. Seeds not often perfected.

Authors notice several varieties of this species, differing chiefly in size and uprightness It sometimes occurs very hairy, and is often infested with hairy swellings caused by an insect. The lemon-scented variety is common in gardens, though rarely found wild.

Pubd 1 Mar. 1816 by Jas Sowerby, London.

VICIA sepium.

Bush Vetch.

DIADELPHIA Decandria.

GEN. CHAR. *Stigma* tranversely bearded on the lower side.

SPEC. CHAR. Pods about four on a stalk, upright, smooth. Leaflets ovate, obtuse; gradually smaller upwards.

SYN. Vicia sepium. *Linn. Sp. Pl.* 1038. *Sm. Fl. Brit.* 773. *Huds.* 320. *With.* 637. *Hull.* 161. *Relh.* 282. *Sibth.* 224. *Abbot.* 158.

V. sepium perennis. *Raii Syn.* 320.

COMMON among bushes by road sides, and about hedges, flowering in May and June.

Root perennial, somewhat creeping. Stems about 2 feet high, weak, but little branched, leafy, furrowed, supporting themselves on other plants by means of the branched tendrils which terminate the footstalks of their leaves. Leaflets numerous, ovate, obtuse, thin, hairy, gradually smaller towards the end of each stalk. Stipulæ more or less lunate and toothed. Flowers axillary, 3 or 4 on a short stalk, all leaning one way. Calyx dull purple, hairy. Corolla variegated with blue, purple, and greenish white. Pods when ripe nearly upright, brown, dotted, destitute of hairs. Seeds globular, smooth.

We know of no valuable qualities that belong to this Vetch, nor has it attracted the notice of cultivators. We have never seen the white variety mentioned in Ray's *Synopsis*, *p.* 478.

HYPNUM piliferum.

Hair-pointed Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* double: outer of 16 tapering teeth: *inner* a toothed membrane. *Flowers* lateral. *Fruit-stalk* from a scaly sheath.

SPEC. CHAR. Branches scattered. Leaves ovate, concave, entire, with a single rib reaching half way from the base, and tipped with a hair. Lid awl-shaped.

SYN. Hypnum piliferum. *Schreb. Lips.* 91. *Sm. Fl. Brit.* 1319. *Hewd. Sp. Musc.* 275. *Crypt. v.* 4. 35. *t.* 14. *Turn. Musc. Hib.* 178.

SENT by our obliging friend Mr. Winch from Northumberland in July last. We have it also from the Rev. H. Davies, and it has been found in Ireland by Mr. Scott. It is said to grow in moist shady situations.

The stems vary from 2 to 6 or 8 inches in length, being procumbent, very irregularly branched, their branches spreading, unequal in length, cylindrical and rather acute. Leaves loosely imbricated on every side, of a pale shining green, ovate, obtuse, concave, entire, smooth, hair-pointed, furnished with a rib from their base which commonly vanishes about the middle. Fruit-stalks an inch or more in length, red, wiry. Sheath of several pale, loosely spreading, hair-pointed scales. Capsule drooping, ovate, swelling and short when ripe. Fringe red. Lid scarcely so long as the capsule, slender, with a conical base.

1517

1478.

Bryum trichodes.

Pub. 1 Dec. 1815 by Jas. Sowerby, London.

BRYUM trichodes.

Long Capillary Thread-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* double: *outer* of 16 teeth, broad at their base: *inner* a toothed membrane. *Flowers* terminal. *Capsule* ovate-oblong, smooth. *Veil* smooth.

SPEC. CHAR. Stem but little branched. Leaves linear, obtuse. Capsule obovate, incurved, inclining. Fruit-stalk very long.

SYN. Bryum trichodes. *Linn. Sp. Pl.* 1585. *Sm. Fl. Brit.* 1350. *Dicks. Crypt. fasc.* 2. 7. *H. Sicc. fasc.* 3. 21. *Hull.* 263.

B. trichodes aurem, capsulis incurvis obtusis in setis longis. *Dill. Musc.* 389. *t.* 49. *f.* 58.

Mnium uliginosum. *With.* 800.

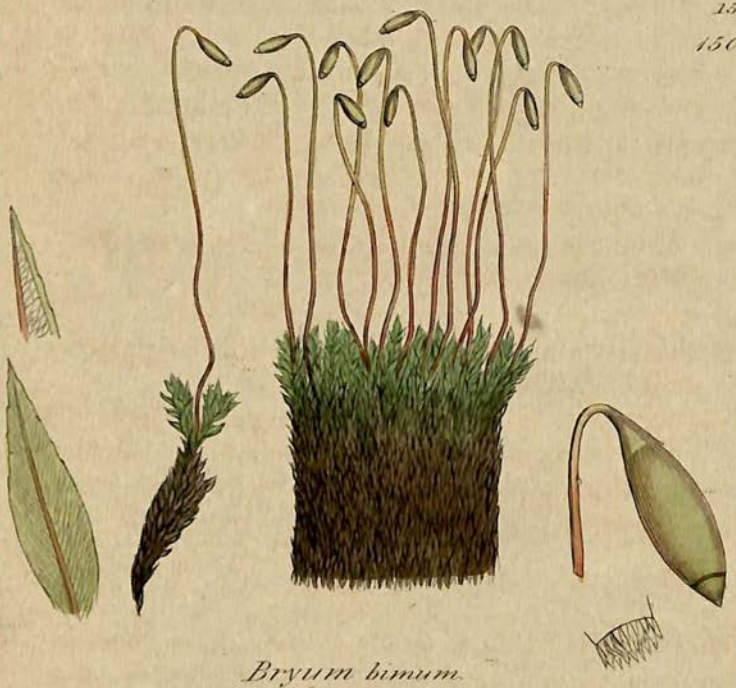
Meesia uliginosa. *Hewd. Sp. Musc.* 173. *Crypt. v.* 1. 1. *t.* 1, 2.

THIS moss, to which Hedwig has devoted the 2 first plates of his great work, is remarkable for having longer fruit-stalks, in proportion to its size, than any other found in Britain, though in that respect it must yield to the exotic *Meesia longiseta* of the same author. Mr. Dickson found it on bogs in Scotland. Mr. Winch sent our specimens from Northumberland. It bears fruit in June and July, and is perennial.

The stems are seldom an inch high, erect, simple or divided, red when young, black and rusty when old. Leaves nearly upright, of a full yellowish shining green, linear, narrow, obtuse, entire, with a strong coloured rib. Fruit-stalk terminal, capillary, red, paler upwards. Capsule obovate, obtuse, curved and inclining, with a short base most evident in an advanced state of growth. Lid conical, obtuse, very short. Veil straight, slender. Outer fringe short: inner reticulated.

1518

1502.



Bryum bimum.

Oct.r 1.1806. Published by Jd. Sowerby, London.

BRYUM bimum.

Long-stalked Bog Thread-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* double: *outer* of 16 teeth, broad at their base: *inner* a toothed membrane. *Flowers* terminal. *Capsule* ovate-oblong, smooth. *Veil* smooth.

SPEC. CHAR. Stem branched. Leaves alternate, linear-lanceolate, slightly serrated near the point. Capsule obovate, elongated, pendulous.

SYN. Bryum bimum. *Schreb. Lips.* 83. *Sm. Fl. Brit.* 1365. *Turn. Musc. Hib.* 127.

B triquetrum . *Huds.* 490. *Hull.* 256.

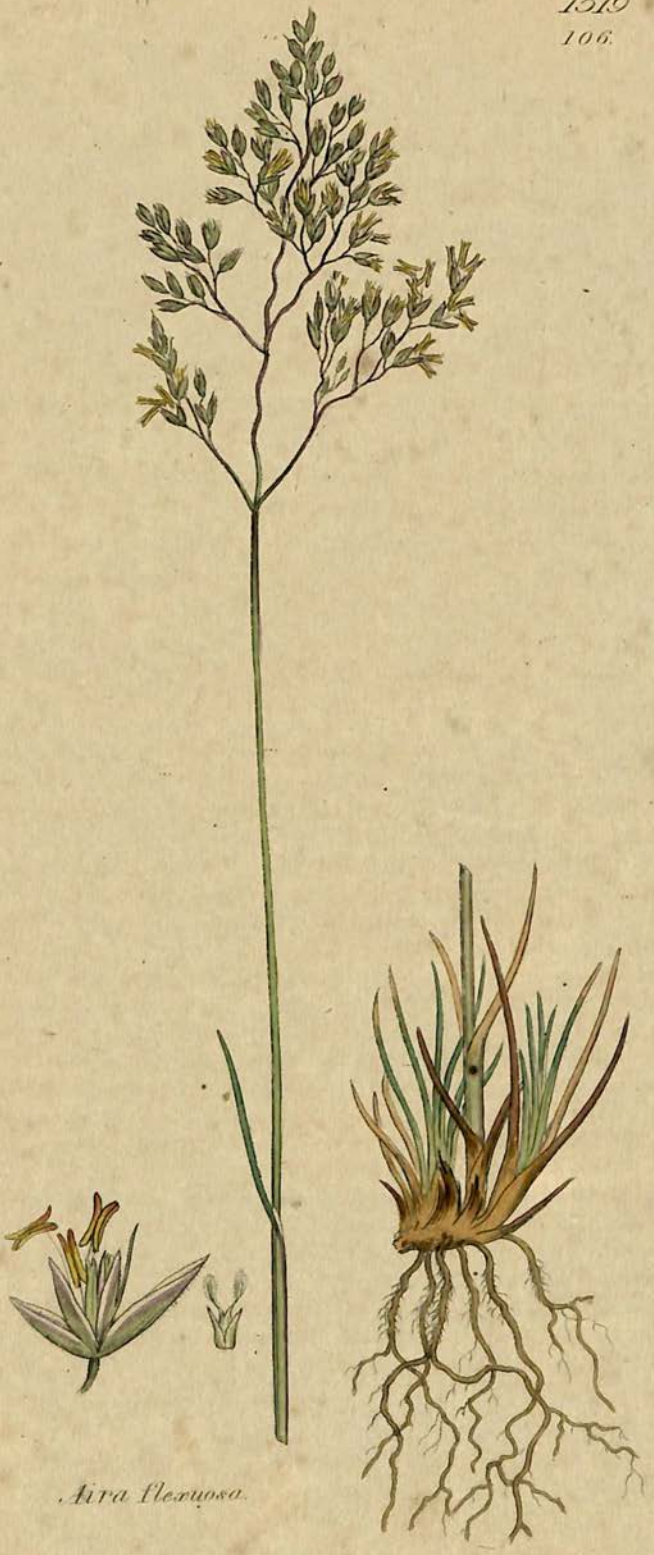
B. lanceolatum bimum, setis et capsulis longis pendulis. *Dill. Musc.* 405. *t.* 51. *f.* 73.

B. nitidum, foliis serpilli pellucidis angustis, capitulis tumidis nutantibus, prælatis pecidulis e surculis annotinis egredientibus. *Dill. in Raii Syn.* 102.

Mnium pseudo-triquetrum, var. 2. *With.* 808.

FOR this we are obliged to Mr. Winch. It is found in mountainous boggy places, bearing fruit in the summer season, and is perennial.

Stems 2 or 3 inches high, irregularly branched, soon assuming a dark ferruginous hue. Leaves longish, sharp-pointed, pale green, pellucid, obsoletely serrated in the upper part, varying in breadth, furnished with a coloured midrib. Fruit-stalks, as Dillenius observes, from the summits of branches which are 2 or 3 years old, purple below, pale above, polished, 2 or 3 inches long, often bent near the base. Capsule pendulous, long, of a slender obovate or club-shaped figure when ripe. Fringe yellow.



Aira flexuosa.

ARIA flexuosa.

Waved Mountain Hair-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, 2-flowered. *Cor.* of 2 valves. *Florets* without any imperfect one between them.

SPEC. CHAR. Leaves bristle-shaped. Stem almost naked. Panicle spreading, three-forked; its branches wavy. Awns bent.

SYN. Aira flexuosa. *Linn. Sp. Pl.* 96. *Sm. Fl. Brit.* 85. *Huds.* 34. *With.* 136. *Hull.* 20. *Relh.* 29. *Sibth.* 38. *Abbot.* 15.

Gramen paniculatum, locustis parvis, purpureo-argenteis, majus et perenne. *Raii Syn.* 407.

A NATIVE of dry elevated turfy or sandy heaths in all parts of Britain, flowering in July.

The root is perennial, consisting of long fibres; and in sandy ground more especially those fibres are woolly. We have observed woolly roots to be common in grasses, whether annual or perennial, that grow in sand. Stem 12 or 18 inches high, with one knot near the base, erect, smooth, almost naked, of a brown or purplish hue. Leaves short, slender, rough-edged, with a broad sheathing purplish base. Stipula short, obtuse, cloven. Panicle loose and spreading, three-forked, rough, remarkable for its shining brown colour, and still more for its crisped or wavy branches. The flowers stand upright on straight alternate stalks. Glumes shining, variegated with brown, green, and a silvery white, all nearly equal in length, jagged at the point. Florets 2, hairy at the base, one of them a little elevated. Awns from the back of the corolla, bent and twisted when dry, rising a little above each floret.

We are almost persuaded, by the remarks of our friend Mr. Knapp, that the two varieties mentioned in *Fl. Brit.* may form a distinct species, which Hudson first described by the name of *setacea*.

Nov.1 1818 Published by Jas. Sowerby London

POA fluitans.

Floating Meadow-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the base. *Cor.* of 2 ovate, pointed, beardless valves.

SPEC. CHAR. Panicle branched, spreading. Spikelets close-pressed; cylindrical, many-flowered. Florets obtuse, with seven ribs and intermediate ones at the base.

SYN. Poa fluitans. *Scop. Carn. v.* 1. 73. *Salisb. Prod.* 21. *Sm. Fl. Brit.* 96. *Relh.* 32.

Festuca fluitans. *Linn. Sp. Pl.* 111. *Huds.* 46. *With.* 156. *Hull.* 24. *Sibth.* 45. *Abbot.* 21. *Curt. Lond. fasc.* 1. *t.* 7. *Mart. Rust. t.* 113.

Gramen aquaticum cum longissimâ paniculâ. *Raii Syn.* 412.

FREQUENT in stagnant waters, or about the margins of slow streams, flowering throughout the summer.

Root long and creeping, throwing out many fibres at the joints, its upper part floating in the water. Stems solitary from each joint, ascending, round, striated, leafy, smooth, hollow and tender. Leaves flat, broad, obtuse, smooth; the lower ones floating; all with long, compressed, smooth sheaths. Stipulæ short, pointed, often torn. Panicle nearly upright, smooth, pale, with alternate, more or less spreading, branches. Spikelets alternate, nearly sessile, close-pressed to the branches, linear, cylindrical, with from 8 to 12 florets. Calyx unequal, membranous, obtuse, with a green keel, and no ribs nor furrows. Florets loosely spiked, somewhat cylindrical, obtuse, roughish under a high magnifier, 7-ribbed, with short intermediate ribs at the bottom, their summit membranous, white, and mostly toothed: inner valves notched. Antheræ short and round.

The seeds are said to be collected for food in Holland, and called *Manna Seeds*.—See Curtis.

1521
434
Chærophyllum
temulentum.

CHÆROPHYLLUM temulentum.

Rough Cow Parsley.

PENTANDRIA Digynia.

GEN. CHAR. *General invol.* none; *partial* reflexed, concave. *Petals* heart-shaped. *Fruit* oblong, smoothish.

SPEC. CHAR. Stem rough, swelled under each joint.

SYN. Chærophyllum temulentum. *Linn. Sp. Pl.* 370. *Sm. Fl. Brit.* 326. *Huds.* 125. *With.* 308. *Hull.* 63. *Relh.* 119. *Sibth.* 101. *Abbot.* 66. *Curt. Lond. fasc.* 6. *t.* 24.

Cerefolium sylvestre. *Raii Syn.* 207.

COMMON in shady places and under hedges, where its flowers are seen in abundance throughout the months of June and July. The rough stem, swelled below the insertion of every leaf, and speckled with purple, and the young drooping umbels, are its distinguishing characters.

The root is biennial, tap-shaped, often divided. Stem about 3 feet high, branched, leafy, round, slightly striated, rough with spreading hairs. Leaves alternate, doubly pinnate, pinnatifid and lobed, hairy, pale or rather glaucous beneath. Umbels rough, spreading. Partial involucra lanceolate, slightly confluent at their base, rough at the margin and keel. Petals pure white, irregular, deeply cloven. Fruit oblong, very smooth and polished, scarcely striated.

The whole plant has a sweetish aromatic flavour, and is eaten by cattle. It is often subject to a blight or mildew.

COTYLEDON lutea.

Greater Yellow Navelwort.

DECANDRIA Pentagynia.

GEN. CHAR. *Cal.* five-cleft. *Cor.* of one petal. *Nectary* of five scales at the base of the germen. *Capsules* five.

SPEC. CHAR. Leaves deeply crenate or toothed; the lowermost somewhat peltate. Stem spicate, mostly simple. Flowers erect. Root creeping.

SYN. Cotyledon lutea. *Huds.* 194. *Sm. Fl. Brit.* 484. *With.* 426. *Hull.* 99.

C. Umbilicus. *Linn. Sp. Pl.* 615, α.

C. flore luteo, radice tuberosâ repente. *Dodart. Mem.* 73, with a figure.

OUR knowledge of this fine plant as growing in Britain is entirely owing to Mr. Hudson. He gives it as a native of walls and moist stony places in the west riding of Yorkshire, on the authority of his friend Tofield, adding that he himself saw it in the garden of a Mr. Clement who received it from Somersetshire. Plants communicated by Mr. Hudson to Chelsea Garden have flourished and increased there, and from one of them our figure was taken in July last.

The root is perennial, fleshy and creeping. Stem a foot or more in height, sometimes branched. Lower leaves only peltate; the rest obovate, scattered, on short stalks, deeply crenate or toothed, succulent, smooth. Flowers very numerous in a dense, upright, cylindrical spike, all nearly erect, on short stalks. Corolla and stamina bright yellow. Nectaries lunate. Bracteæ entire or toothed.

It is remarkable that Linnæus should have made this the α, or primary species, of his *C. Umbilicus*, whereas the most common kind, with really umbilicated leaves, and so called by all authors besides, alone deserves the name. See our *vol.* 5. *t.* 325.

Mespilus germanica.

Nov.r 2.1815 Published by Jas Sowerby, London.

MESPILUS germanica.

Common Medlar.

ICOSANDRIA Pentagynia.

GEN. CHAR. *Cal.* in 5 segments. *Petals* 5. *Drupa* inferior. *Nuts* 2 to 5, with 2 *seeds* each.

SPEC. CHAR. Thorns none. Leaves lanceolate, almost entire, a little downy. Flowers solitary, nearly sessile, terminal. Styles five.

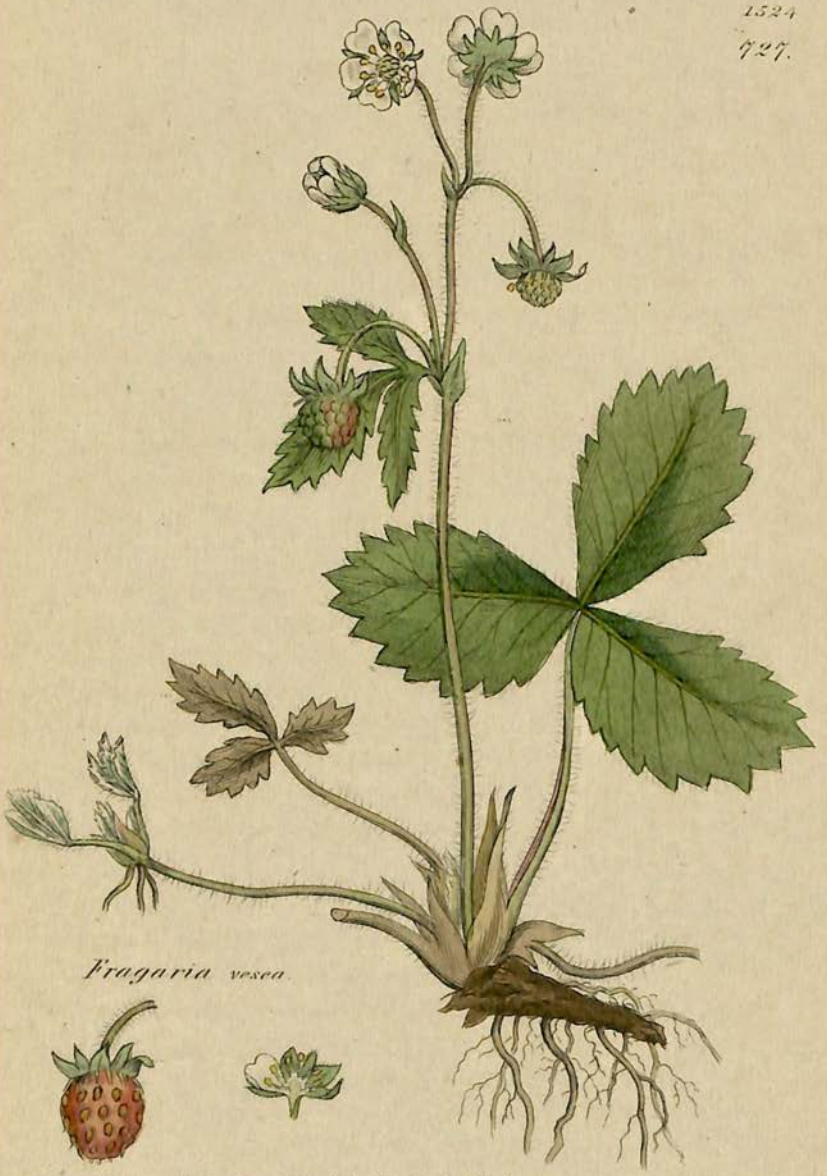
SYN. Mespilus germanica. *Linn. Sp. Pl.* 684. *Sm. Fl. Brit.* 530. *Huds.* 217. *With.* 461. *Hull.* 109. Mespilus. *Dill. in Raii Syn.* 453.

HAVING never found this tree wild, we are obliged to have recourse to a garden specimen. Dillenius admitted it into his edition of Ray's *Synopsis* at the instigation of Du Bois, who thought it wild in all the hedges about Minshull, Cheshire; an opinion we have not been able to confirm or to disprove. It forms a moderate-sized spreading tree, flowering in May or June. The fruit is perfected in autumn; but the pulp is harsh and astringent, not eatable till it has been mellowed by keeping. It is subject to many variations in size and flavour, like the apple and pear.

The leaves are deciduous, spreading, oblong, on footstalks, soft and pliable, veiny, most downy beneath, for the most part entire, except sometimes towards the point. Flowers solitary at the end of each branch, encompassed with leaves, nearly sessile, large, white, inodorous. Calyx downy; its teeth long, narrow, permanent. Petals roundish, notched. Styles 5, their base surrounded with a brownish ring or nectary. Fruit depressed, concave at the top. Nuts hard, compressed, angular.

1524

727.



Fragaria vesca.

Vol. 1. 1808. Published by Jas. Sowerby, London.

FRAGARIA vesca.

Wood Strawberry.

ICOSANDRIA Polygynia.

GEN. CHAR. *Cal.* inferior, in 10 segments. *Petals 5.* *Receptacle* of the seeds ovate, pulpy, deciduous. *Seeds* smooth.

SPEC. CHAR. Root with creeping scyons.

SYN. Fragaria vesca. *Linn. Sp. Pl.* 708. *Sm. Fl. Brit.* 546. *Huds.* 221. *With.* 471. *Hull.* 112. *Relh.* 196. *Sibth.* 160. *Abbot.* 112.
Fragaria. *Raii Syn.* 254.

THE delicious Strawberry, of which numerous varieties (or perhaps species) in our gardens well compensate the want of many a tropical luxury, is altogether the fruit of a cool climate. In Sweden the Wood Strawberries, such as that in our plate gathered at Matlock, are so abundant, that the tables are chiefly supplied with wild fruit. Linnæus gave a general order to his servants to buy all that were brought to his door throughout the season, thinking this fruit peculiarly wholesome for persons of a gouty habit. In Gloucestershire we have seen Strawberries for the dessert gathered out of the woods every day. Indeed most woods and thickets in Britain produce them. The first blossoms appear in May, and are succeeded by others till August.

The root is perennial, throwing out long creeping runners or scyons. Stems short, erect, and nearly simple. Leaves mostly radical, on long stalks, ternate, downy, obtuse, strongly and regularly serrated, marked with parallel veins. Flowers erect, on hairy, cymose, bracteated stalks. Petals white, notched, varying in size. Fruit drooping, ovate, fleshy, red, fragrant, studded all over with naked smooth seeds, each accompanied by a permanent withered style.

1826

1412

Polypodium calcareum.

Nov. 2. 1805. Published by Jas. Sowerby, London.

POLYPODIUM calcareum.

Rigid Three-branched Polypody.

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* scattered, in roundish dots, not marginal. *Involucrum* none.

SPEC. CHAR. Frond three-branched: branches bipinnate, erect, somewhat rigid, the lobes bluntish and slightly notched. Dots of seeds confluent.

SYN. Polypodium calcareum. *Sm. Fl. Brit.* 1117.
P. Dryopteris. *Dicks. Dr. Pl.* 16. *Bolt. Fil.* 53. *t.* 1.
Dryopteris Tragi. *Ger. em.* 1135.

GATHERED on the 27th of last June at Matlock bath, Derbyshire. It grows copiously among grass and bushes on the crumbling calcareous stone, or *tufa*, deposited, in the lapse of ages, by the Matlock water, and in removing a large bed of which, before Saxton's Lodging-house, the skeleton of a large animal of the Deer kind was lately found. See *Pennant's Brit. Zool. ed.* 4. *v.* 1. 52.

I never observed this species in any other place, nor was I for some time convinced of its being distinct from *P. Dryopteris* figured in our 9th *vol. t.* 616. I am still uncertain whether the synonyms of any of the more accurate cryptogamists of Germany belong to it.

The root is, of course, perennial, and creeps like that of *P. Dryopteris*, but is thicker and commonly shorter. The base of the stem is scaly, not smooth, and the whole frond is firmer and more rigid, the three principal branches generally smaller, nearly erect, and by no means flaccid or loosely pendent. The young capsules are pale, without any involucrum; when ripe they become brown or black, and run together, covering the whole back of the leaf, whereas those of *P. Dryopteris* remain in distinct dots.

BARTRAMIA crispa.

Frizzled Bartramia.

CRYPTOGAMIA Musci.

GEN. CHAR. *Capsule* spherical, at length furrowed. *Outer fringe* of 16 tapering teeth; *inner* a plaited membrane.

SPEC. CHAR. Fruit-stalks erect, longer than the stems. Leaves setaceous, broad at the base, curled when dry. Capsule somewhat oblique. Lid obtusely conical.

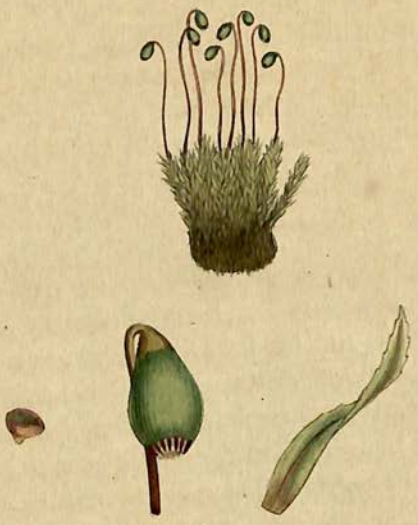
SYN. Bartramia crispa. *Swartz. Musc. Suec.* 73. *Turn. in Ann. of Bot. v.* 1. 527.

OUR specimens of this moss were sent by Mr. Winch from Northumberland. It is a very recent acquisition to the British Flora, having been discovered by that gentleman in Healyfield, and, in company with Mr. Richard Waugh, in Alendale and Cheviot in that county. Mr. Turner, in the valuable periodical publication of Dr. Sims and Mr. Konig above quoted, has fully described it, and clearly established it as a distinct species from the more common *B. pomiformis*, figured in *v.* 14. *t.* 998.

The stems form tufts, vary in height from half an inch to 2 or 3 inches, and are but little branched. Leaves pale green, dilated at their base, then suddenly contracted into a tapering or awl-shaped form, narrower than those of *B. pomiformis*, serrated, and furnished with a strong rib. When dry they become much curled and contorted. Fruit-stalks rising above the stems, not an inch long, tawny or yellow, shining. Capsules oblique, at first globose, then somewhat oblong and furrowed. Lid obtusely conical, rather more prominent than in the above-named species. Outer fringe bright red.

1327

1408.



Bryum compactum.

Hook.t Mss. Published by Jas. Sowerby, London.

BRYUM compactum.

Compact Thread-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* double: *outer* of 16 teeth, broad at their base: *inner* a toothed membrane. *Flowers* terminal. *Capsule* ovate-oblong, smooth. *Veil* smooth.

SPEC. CHAR. Stem divided at the base. Leaves lanceolate, keeled, serrated towards the point. Capsule ovate, pendulous.

SYN. Bryum compactum. *Dicks. Crypt. fasc.* 4. 15. *t.* 11. *f.* 11. *Sm. Fl. Brit.* 1359. *Turn. Musc. Hib.* 124.

ALL our knowledge of this *Bryum* was derived from Mr. Dickson, till specimens were sent to Mr. Sowerby by the Rev. Mr. Dalton, who has been uncommonly fortunate in discovering rare mosses near his residence at Copgrove, Yorkshire. He found it in a small running drain near Scriven, the seat of Sir Thomas Slingsby, Bart., and in another drain between Copgrove and Farnham. The capsules are perfected in the spring.

The roots are perennial. Stems half an inch or more in height, erect, forming a dense tuft, some of them simple, others divided at the bottom, often stripped of their leaves in the lower part, when they appear red. Leaves of a pale yellowish shining green, narrow, lanceolate, acute, keeled, serrated from the middle to the point, furnished with a strong red rib; the lowermost shorter and almost heart-shaped. Fruit-stalk terminal, solitary, scarcely an inch long, a little wavy, of a red or tawny hue. Capsule pendulous; when ripe ovate, short, brownish, with a spreading mouth so as to be almost turbinate; in an earlier state the capsule is rather pear-shaped. Lid convex, with a small point, red. Fringe red.

1528

BRYUM nigricans.

Dark-green Thread-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* double: *outer* of 16 teeth, broad at their base: *inner* a toothed membrane. *Flowers* terminal. *Capsule* ovate-oblong, smooth. *Veil* smooth.

SPEC. CHAR. Stem branched at the base. Leaves lanceolate, straight, serrated about the point. Capsule turbinate, pendulous.

SYN. Bryum nigricans. *Dicks. Crypt. fasc.* 4. 15. *t.* 11. *f.* 10. *Sm. Fl. Brit.* 1363.

NO one but Mr. Dickson seems to have known this moss, till from his Scottish specimens, and the account published by himself, a description of it appeared in the *Flora Britannica*. Our liberal friend Mr. Winch has lately communicated it from Northumberland. It bears fruit in July and is perennial, growing on turfy bogs.

The stems form tufts an inch or two in height, and are more or less branched. Leaves of a dull darkish green, closely imbricated, straight, lanceolate, broadish, acute, keeled; dilated and entire at the base; serrated near the point. Fruit-stalk terminal, solitary, various in length, wavy, curved at the top, red. Capsule pendulous, turbinate; when ripe of a rusty brown, with a wide mouth. Lid convex, with a little blunt point. Fringe yellowish.

LEPRARIA lutescens.

Buff Lepraria.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* in a powdery substance loosely clothing a thin crust.

SPEC. CHAR. Crust leprous, rugged, cracked, buff-coloured. Fructifications globose, of the same colour.

SYN. Lepraria lutescens. *Achar. Meth. 5.*
Lepra lutescens. *Hoffm. Pl. Lich. v. 1. 100. t. 23. f. 1, 2.*
Lichen lutescens. *Achar. Prod. 9.*

FOUND on the stems of old trees, especially oaks, in unfrequented woods. Mr. Turner has observed it in Acle wood, Norfolk, and Mr. W. Borrer sent our specimens from Hurst Pierrepoint, Sussex. It occurs at all seasons, but is best seen in winter, or wet weather.

The whole plant is externally of an uniform buff or pale ochraceous yellow. Crust thick, white and chalky within, very unequal and rugged; its surface clothed with buff-coloured powder or minute grains.

It is now generally agreed that various appearances like the shields of a Lichen, which some eminent German botanists have noticed on this plant, have either been parasitical bodies, or some other deception. There can be no question of its agreeing in genus with *Lepraria alba, v. 19. t. 1349* (numbered by mistake 1350).

Nov.r 1.1816. Published by Jas. Sowerby, London.

LICHEN tigillaris.

Yellow Rail Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles in which the seeds are imbedded.

SPEC. CHAR. Crust spreading, cracked, rugged, smooth, yellow, rising into warts which bear the shields. Shields minute, black, flat, with a black border.

SYN. Lichen tigillaris. *Achar. Prod.* 67.
Lecidea tigillaris. *Achar. Meth.* 46. *t.* 2. *f.* 1.

MR. DICKSON first mentioned this to us as a British species. He gathered it on trees in Enfield Chace. Mr. E. Forster communicated the specimen here represented from a barn at Walthamstow. The same is found also on barns, rails, and old paling at Loughton, Essex.

The crust spreads in an indeterminate manner, and in a young state is loosely scattered over the decaying wood. Its colour is a bright conspicuous yellow when dry; greenish occasionally when wet. When perfect the crust is minutely cracked and rugged or warty, yet the surface is smooth, not powdery. Each of the larger and more prominent warts bears on its top a minute sessile black shield, surrounded by a smooth black border.

The minuteness of the shields has, perhaps, caused this Lichen to be overlooked, notwithstanding its striking yellow colour, as something in an imperfect state.

The acuteness and accuracy of Dr. Acharius first determined its characters, nor can any species be more distinct.

1531
37.

Valeriana rubra.

VALERIANA rubra.

Red Valerian.

TRIANDRIA Monogynia.

GEN. CHAR. *Cal.* none. *Cor.* of 1 petal, superior, gibbous on one side at the base. *Seed* one.

SPEC. CHAR. Stamen one. Flowers spurred. Leaves lanceolate, nearly entire.

SYN. Valeriana rubra. *Linn. Sp. Pl.* 44. *Sm. Fl. Brit.* 37. *Huds.* 12. *With.* 65. *Hull.* 10. *Relh.* 16. *Sibth.* 20.

V. rubra Dodonæi. *Ger. em.* 678.

RAY has omitted the Red Valerian, probably thinking it an outcast of gardens where it is very common. We were of the same opinion till we observed it very abundant, and to all appearance certainly wild, in the chalk-pits of Kent. On old buildings it is frequent. The annexed specimen was taken from that magnificent ruin the Abbot's kitchen at Glastonbury.

It is a perennial plant, and flowers copiously throughout the summer. The whole herbage is perfectly smooth. Stems numerous, round, slightly branched, leafy, a foot and half high. Leaves somewhat glaucous, rather succulent, turning yellow when dried; the lower ones lanceolate and entire; the upper ones sessile, ovate, pointed, sometimes toothed at their broadest part. Flowers numerous, erect, in a dense, terminal, compound corymbus, with a pair of small bracteæ to each flower-stalk. Corolla slender, with a lateral spur, elegant, rose-coloured, rarely white; the margin 5-cleft and irregular. Stamen but one, with a large, prominent, dark anthera. Stigma rather obtuse. Seed with an involute feathery crown, which unrolls as it ripens.

The root partakes of the nauseous aromatic flavour of its genus, but is not used in medicine.

1532

90*

AGROSTIS stolonifera.

Creeping Bent-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 acute valves, single-flowered. *Cor.* of 2 unequal membranous valves. *Stigmas* feathery.

SPEC. CHAR. Panicle close. Stem branched, creeping. Flowers crowded. Calyx-valves lanceolate, rough.

SYN. Agrostis stolonifera. *Linn. Sp. Pl.* 93. *Sm. Fl. Brit.* 80. *With.* 131. *Hull.* 19. *Relh.* 27. *Sibth.* 36. *Abbot.* 14. *Mart. Rust. t.* 120.

A. polymorpha δ. *Huds.* 31.

Gramen montanum miliaceum minus, radice repente. *Raii Syn.* 402?

G. caninum supinum. *Ger. em.* 26.

GATHERED near Liverpool by Mr. John Shepherd, in wet situations on a clay soil near the shore of the Mersey. We have chiefly seen it in maritime situations. It flowers in July.

The roots are perennial, with downy fibres, and throw out long, procumbent, round, hard and smooth stems, which take root at all their joints, and bear numerous, broadish, pointed, ribbed leaves rough on both sides. Stipula oblong, often torn. Panicle erect, the branches crowded, short dense ones being clustered about the bases of the longer ones. Flowers linear-lanceolate. Calyx of 2 bluntish, purplish, nearly equal, valves, the outer always rough on the keel, and sometimes both of them are rough all over. Petals blunt, shorter than the calyx, unequal, generally without awns.

A small variety occurs in dry places, to which perhaps Ray's synonym may belong.

1533
521.

Rumex sanguineus.

Dec.r 1. 1808. Published by Jas. Sowerby.

RUMEX sanguineus.

Bloody-veined Dock.

HEXANDRIA Trigynia.

GEN. CHAR. *Cal.* 3-leaved. *Petals* 3, closed. *Seed* 1, superior, naked, triangular. *Stigmas* many-cleft.

SPEC. CHAR. Valves entire, oblong, one of them at least bearing a grain. Leaves lanceolate, somewhat heart-shaped.

SYN. Rumex sanguineus. *Linn. Sp. Pl.* 476. *Sm. Fl. Brit.* 390. *Huds.* 153. *With.* 353. *Hull.* 77. *Relh.* 141. *Sibth.* 118.

Lapathum folio acuto rubente. *Raii Syn.* 142.

β. Var. viridis. *Sibth.* 118. *Abbot.* 81.

Rumex acutus. *Curt. Lond. fasc.* 3. *t.* 21? *With.* 354. *Wade Dubl.* 103. *Huds.* 155. β.

R. Nemolapathum. *Ehrh. Phytoph. n.* 94. *Linn. Suppl.* 212.

Lapathum viride. *Dill. in Raii Syn.* 141.

FOUND occasionally in groves and waste places, flowering in July. Mr. W. Borrer sent it from Sussex, and the lady of the Rev. Dr. Abbot observed it on Headington hill near Oxford.

The root is perennial, tap-shaped. Stem 2 or 3 feet high, straight, branched, angular, leafy, smooth, reddish. Leaves all upon footstalks, lanceolate, smooth, veiny, slightly crisped at the edge; the lowermost large, and more or less heart-shaped at their base. Flowers in alternate drooping clusters ranged along the branches, and almost destitute of leaves. Calyx quite entire, as well as the petals, which are oblong, each marked with a red swelling rib. One of these ribs (rarely more than one) bears a very large red grain or tubercle, conspicuous as the fruit ripens. The stalks and veins of the leaves are remarkable for their deep-red juice. In the variety β however, which ought perhaps to be reckoned the original species, the leaves are green. This variety, common in woods, has often been confounded with *R. acutus*, *t.* 724, which differs in having more zigzag and leafy branches, shorter and smaller valves, all constantly bearing grains, and in its place of growth, which is more wet and marshy.

2634

544

Œnothera biennis.

Curtis's Bot. Published by W. Curtis, London.

OENOTHERA biennis.

Common Evening-Primrose.

OCTANDRIA Monogynia.

GEN. CHAR. *Cal.* in 4 segments. *Petals* 4. *Caps.* cylindrical, inferior. *Seeds* naked.

SPEC. CHAR. Leaves ovato-lanceolate, flat. Stem rough, somewhat hairy. Stamina regular. Petals undivided.

SYN. Oenothera biennis. *Linn. Sp. Pl.* 492. *Ait. H. Kew. v.* 2. 2. *Roth. Fl. Germ. v.* 1. 168. *v.* 2. 439. *Fl. Dan. t.* 446.

NOT without the most mature deliberation have we been induced to admit this into a work on British plants. Its being found naturalized on dunghills and waste ground either here or in Germany, as mentioned in Roth's excellent *Flora*, when known to have been introduced to our gardens from America about 200 years ago, would not have satisfied us. Our specimen was gathered on the extensive and dreary sand-banks on the coast a few miles north of Liverpool, where millions of the same species have been observed by Dr. Bostock and Mr. John Shepherd, perfectly wild, and covering a large tract between the first and second range of sand-hills. Some natural cause has no doubt established it there, though possibly from the opposite shores of the Atlantic.

It is biennial, and flowers from July to September. The stem is 2 or 3 feet high, often branched, leafy, angular, rough with minute tubercles, and hairy. Leaves alternate, ovate or lanceolate, toothed, downy; the lowest on stalks, longer, and somewhat waved. Flowers sessile in the bosoms of the upper leaves, so as to form a large spike. They expand in an evening, and are delicately fragrant, of a fine pale yellow. Calyx reflexed. Petals wedge-shaped, waved. Stamina equal and erect. Pods short, rough, full of seeds which differ from those of the *Epilobium* in having no down or wing.

1533
677.

Spergula arvensis.

Pub.d 1 Mar. 1793 by Jas. Sowerby, London.

SPERGULA arvensis.

Rough-seeded Corn Spurrey.

DECANDRIA Pentagynia.

GEN. CHAR. *Cal.* 5-leaved. *Petals* 5, undivided. *Capsule* superior, ovate, of 1 cell and 5 valves.

SPEC. CHAR. Leaves whorled. Stalks of the fruit reflexed. Seeds kidney-shaped, angular, rough.

SYN. Spergula arvensis. *Linn. Sp. Pl.* 630. *Sm. Fl. Brit.* 502. *Huds.* 202. *With.* 436. *Hull.* 102. *Relh.* 179. *Sibth.* 148. *Abbot.* 102. *Curt. Lond. fasc.* 5. *t.* 31.

Alsine Spergula dicta major. *Raii Syn.* 351.

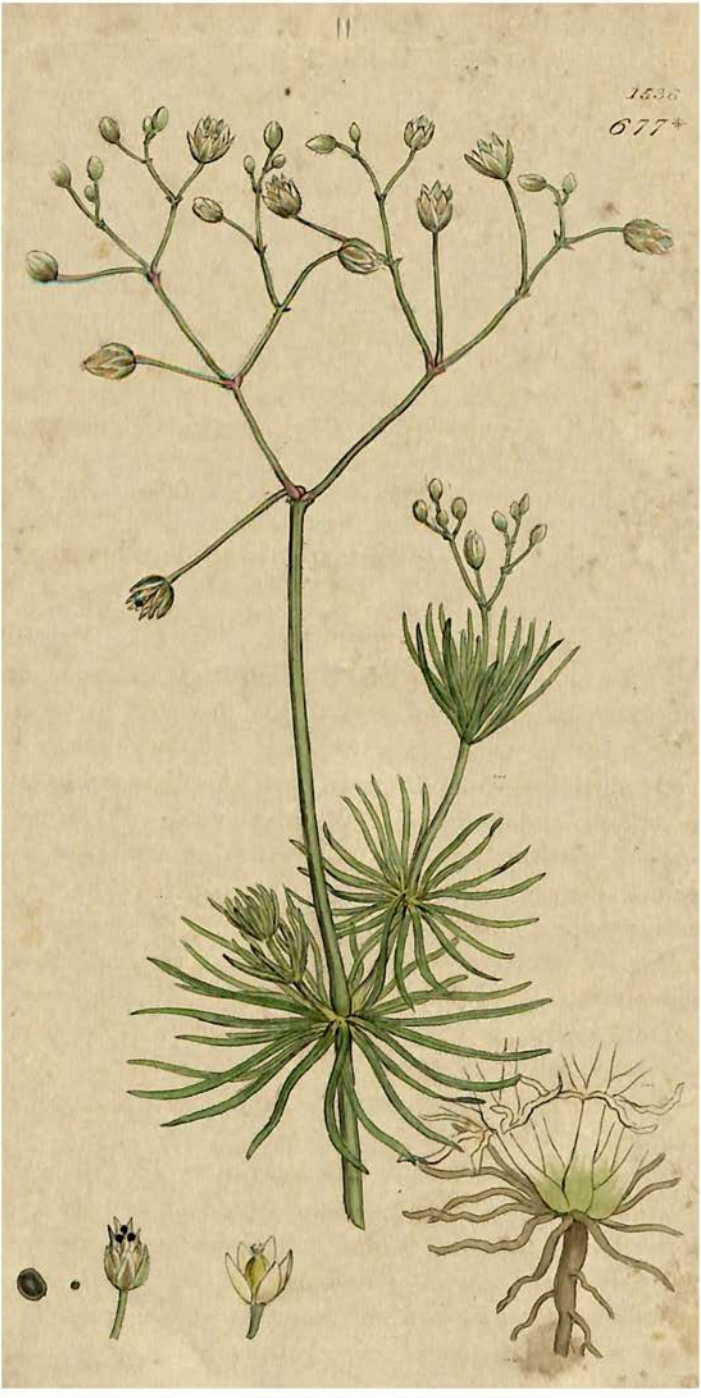
VERY common in corn-fields and waste places on a sandy soil, flowering from July to September.

Root annual, small in proportion to the plant. Stems spreading, very various in luxuriance, round, branched, jointed, downy and viscid especially in their upper part. Leaves many in a whorl at each joint, linear, obtuse, occasionally smooth or downy. Panicles terminal, forked, divaricated. Flower-stalks downy, reflexed as the fruit ripens. Calyx-leaves ovate, bluntish, concave, downy at the back, membranous at the edge. Petals ovate, white, entire, scarcely exceeding the calyx in length. Stamina generally 10, sometimes 5, or some intermediate number. Styles 5, short. Capsule almost twice as long as the calyx. Seeds numerous, kidney-shaped or roundish, swelling, angular, with an obsolete (not membranous) border. When ripe they are black, and rough all over with minute tubercles or bristles.

Mr. Curtis mentions that cattle are fed with this herb, and poultry with its seeds, in Flanders, Germany and Norway. With us it is known only as a troublesome weed in sandy ground.

1536

677*



SPERGULA pentandra.

Smooth-seeded Corn Spurrey.

DECANDRIA Pentagynia.

GEN. CHAR. *Cal.* 5-leaved. *Petals* 5, undivided. *Capsule* superior, ovate, of 1 cell and 5 valves.

SPEC. CHAR. Leaves whorled. Stalks of the fruit reflexed. Stamina five. Seeds lenticular, smooth, with a membranous border.

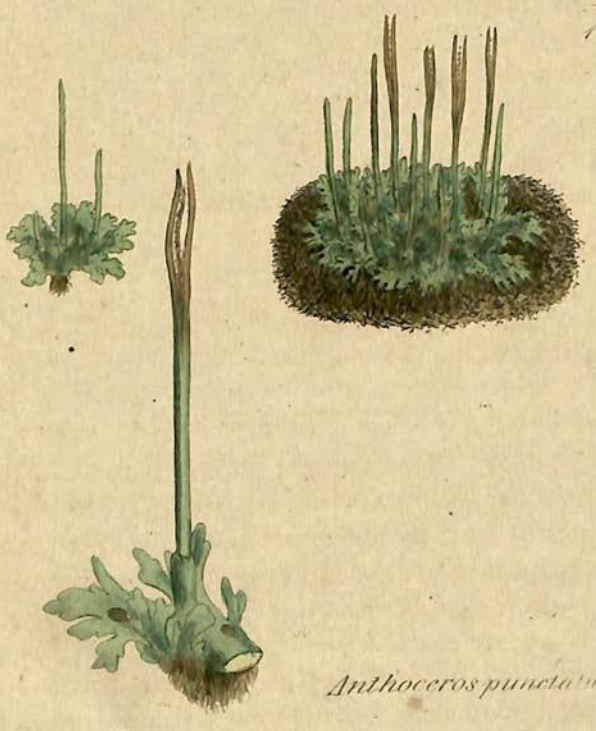
SYN. Spergula pentandra. *Linn. Sp. Pl.* 630. *Abbot.* 102. *Roth. Fl. Germ. v.* 2. 505.

S. annua, semine foliaceo nigro, circulo membranaceo albo cincto. *Dill. in Raii Syn.* 351.

WE are obliged to Mr. John Shepherd, the able Curator of the Liverpool garden, for pointing out this plant to us in August last on several sandy spots near that town, where it grows intermixed with *S. arvensis*, from which it is not to be known till the flowers and seeds are examined. We do not find any difference in the size of the plants, or number of the leaves. Perhaps the flowers of this are rather smaller, and their stamina are naturally 5, scarcely ever more. The most remarkable difference is in the seeds, which are compressed and lenticular, always smooth, and bordered by a very conspicuous whitish membrane. In this respect it differs from *S. arvensis* just as *Arenaria marina* does from *rubra*. How far such differences are permanent, future inquiries must determine, but they appear decisive.

This species is mentioned with doubt in the *Fl. Brit.*, and described according to the best lights I had then to guide me. It is very doubtful whether Mr. Hudson had seen more than the pentandrous variety of *arvensis*, and Mr. Curtis ingenuously expresses his own uncertainty on the subject. For these reasons Mr. Shepherd's discovery gave me peculiar pleasure.

1537
1888.



Anthoceros punctatus.

Dan.t Lizars. Published by Jas Sowerby, London

ANTHOCEROS punctatus.

Jagged-leaved Anthoceros.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male, sessile warts. Female, *Cal.* tubular. *Caps.* awlshaped, 2-valved. *Seeds* numerous, rough, fixed to the valves or to the partition.

SPEC. CHAR. Frond lobed, sinuated; the segments obtuse.

SYN. Anthoceros punctatus. *Linn. Sp. Pl.* 1606. *Huds.* 523. *With.* 888. *Hull.* 282. *Schmidel. Ic.* 183. *t.* 47. *Hoffm. Germ. v.* 2. 94.

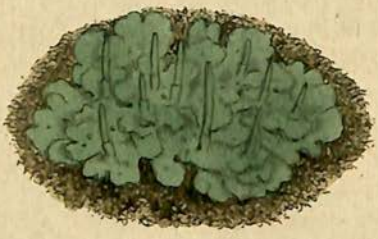
A. foliis minoribus, magis laciniatis. *Dill. Musc.* 476. *t.* 68. *f.* 1.

A. minor, foliis magis carinatis, atque eleganter crenatis, subtus incurvatis. *Mich. Gen.* 11. *t.* 7. *f.* 2.

Lichenastrum gramineo pediculo et capitulo, oblongo, bifurco. *Dill. in Raii Syn.* 109.

THIS plant, not noticed in any of our local Floras, has been found about London, as well as in Sussex, and the north. It grows in damp shady places, and is said by Dillenius to flourish from March to July. Mr. E. Forster gathered our specimens in the fields at Walthamstow on the 1st of October.

The fronds are attached by annual fibrous roots to the moist earth, and spread in a circular manner. Their centre is depressed or concave; their margin lobed, and more or less deeply sinuated or pinnatifid, the segments oblong and obtuse. The colour is a bright shining green. Several dots appear on the surface, which are the male flowers, in the form of black imbedded warts, with a torn margin. The capsules arise like copious blades of grass, each from a sheath, and are cylindrical, tipped with a veil when young, bursting when ripe into 2 valves with a parallel partition. Each cell contains many black rough seeds, fixed to elastic stalks.



Dec.r 1. 1808. Published by Jas. Sowerby, Lond.

ANTHOCEROS major.

Broad-leaved Anthoceros.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male, sessile warts. Female, *Cal.* tubular. *Caps.* awlshaped, 2-valved. *Seeds* numerous, rough, fixed to the valves or to the partition.

SPEC. CHAR. Frond lobed; the segments dilated, rounded and waved.

SYN. Anthoceros major. *Mich. Gen.* 11. *t.* 7. *f.* 1. *Schmidel. Ic.* 71. *t.* 19.

A. lævis. *Linn. Sp. Pl.* 1606. *Hoffm. Germ. v.* 2. 94. *Hedw. Theor.* 108. *t.* 27. *cop. in With. v.* 1. 367.

A. punctatus. *Fl. Dan. t.* 396, bad.

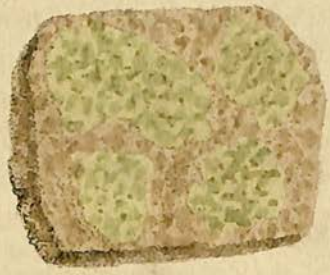
A. foliis majoribus, minus laciniatis. *Dill. Musc.* 476. *t.* 68. *f.* 2.

SENT by Mr. E. Forster from Walthamstow with the preceding, intermixed with which it is generally reported to grow; and it seems our English writers have not distinguished the two species. Their differences were observed by Mr. J. D. Sowerby.

This has larger leaves than *A. punctatus*, the lobes of which are round and entire, not sinuated. Their colour is a darker green. The male warts, as Schmidel well observes, are more superficial and much sooner obliterated. Hence Dillenius, seeing the plant only in fruit, did not observe them; and hence Linnæus named it *lævis*, supposing it had no warts. But as these are no less essential to one species than to the other, we gladly restore Micheli's original and very expressive name. We should even have changed *punctatus* for some other denomination, had we not always been averse to changing names without necessity. When they give a false idea they ought to be altered.

Our specimens of this are later in fructification than the last.

1539
1910



Calicium furfuraceum.

Dec.1.1806. Published by Jas. Sowerby, London.

LICHEN capitatus.

Sulphureous Pin-headed Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

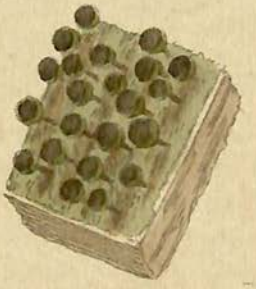
SPEC. CHAR. Crust leprous, powdery, greenish-yellow. Tubercles on capillary foot-stalks, globose, yellow; disk brown, powdery.

SYN. Lichen capitatus. *Ach. Prod.* 86. *Schreb. Lips.* 134. *Relh.* 457.
Calicium capitellatum. *Ach. Meth.* 98.
Mucor furfuraceus. *Linn. Sp. Pl.* 1655. *Hull.* 419.
Clathrus virescens. *Huds.* 632.
Trichia furfuracea. *With. v.* 4. 398.

COLLECTED by Mr. W. Borrer on the sandy soil near Dorking, Surry, in the month of July. It grows also on rotten wood. A specimen sent by Dr. Acharius is on a bit of black turfy earth.

Much diversity of opinion has existed among botanists concerning the genus of this minute vegetable, as the above synonyms evince. It is now indeed no longer in doubt, being unquestionably of the tribe of Lichens named *Calicium* (see *t.* 1465,) which perhaps deserves as well as any other of its allies to be a distinct genus.

The crust is tender and powdery, of a conspicuous sulphur-colour, more or less inclining to green. The minute heads are globular, of the same colour, standing on very slender longish stalks, which are at first yellow, then brown. The powder contained in the heads is likewise of a brown hue.



Calicium phœocephalum.

Drawn 1 1853. Published by Jas Sowerby, London.

LICHEN trabinellus.

Brown Pin-headed Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

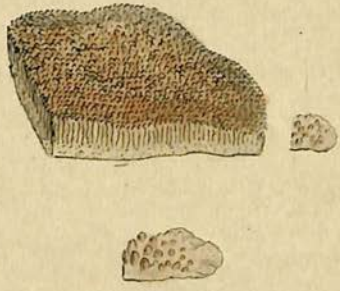
SPEC. CHAR. Crust rugged, cracked, brownish-white. Tubercles on shortish brown foot-stalks, sphærical, flattish, greenish-yellow; disk powdery, dark brown.

SYN. Calicium trabinellum. *Ach. Meth. Suppl.* 14.

COMMUNICATED with the above synonym by Mr. W. Borrer from Hurst-pierrepoint, Sussex, where it grows on several boarded buildings. It was however first observed by Mr. D. Turner on a barn belonging to Mr. Crowe at Lakenham near Norwich, where it is to be found in abundance at all seasons. Our specimens agree exactly with those sent by the acute Mr. Wahlenberg, its original discoverer, from Tornoa in Lapland.

The crust is of the nature of *L. clavellus*, *t.* 1465, but rather more scattered and of a pale brownish hue. The stalks are short, cylindrical, polished, of a dark brown almost black. Heads globular but flattened, externally of a vivid greenish-yellow, especially their border, which forms a striking and beautiful contrast with the dark brown powdery disk.

1541
2266



Isidium corallinum

Dec.r 1.1805. Pub.d by Jas Sowerby, Lond.

LICHEN corallinus.

White Coral-crusted Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles in which the seeds are imbedded.

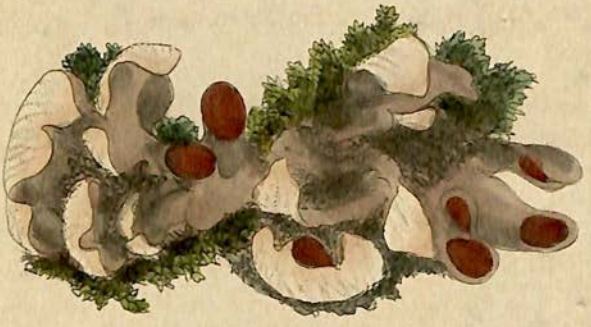
SPEC. CHAR. Crust tartareous, whitish, papillary, uneven, orbicular, with a leafy grey margin; internally fibrous and branched. Tubercles minute, brownish, terminating the branches.

SYN. Lichen corallinus. *Linn. Mant.* 131. *Huds.* 526. *With. v.* 4. 16. *Hull.* 288. *Lightf.* 808. *Ach. Prod.* 87. *Hoffm. Enum.* 40. *t.* 4. *f.* 2.
Isidium corallinum. *Ach. Meth.* 138. *t.* 3. *f.* 7.

OUR late worthy friend Mr. Robert Teesdale, F. L. S., gathered this Lichen at Selby, Yorkshire, and favoured us with one of the specimens here delineated. It occurs, not very frequently, on large stones in the mountainous counties. The finest specimen that ever came under our notice grew at Blackford near Edinburgh, and was perfectly circular and entire, near 12 inches in diameter; in the centre about half an inch thick, and growing gradually thinner to the edge, which was bordered by an uninterrupted, rugose, somewhat leafy, margin, of a reddish grey colour. Of this margin, hitherto unnoticed even by the accurate Acharius, we exhibit a portion in the plate. The general texture of the crust is tartareous, when broken found to consist of upright branched fibres, whose tips render the surface rough, as in *L. coccodes*, *t.* 1511; and each of these tips when perfect bears a minute sessile brownish tubercle. The colour of the whole is nearly white, except the tubercles and border. Very white and more finely branched round portions sometimes grow in a parasitical manner out of the main crust, as is well described by Acharius.

1542

2215



Peltidea spuria 2

Dec.r 1 1825. Published by J.E. Sowerby, London.

LICHEN spurius.

Imperfectly-veined Lichen.

CRYPTOGAMIA Algæ.

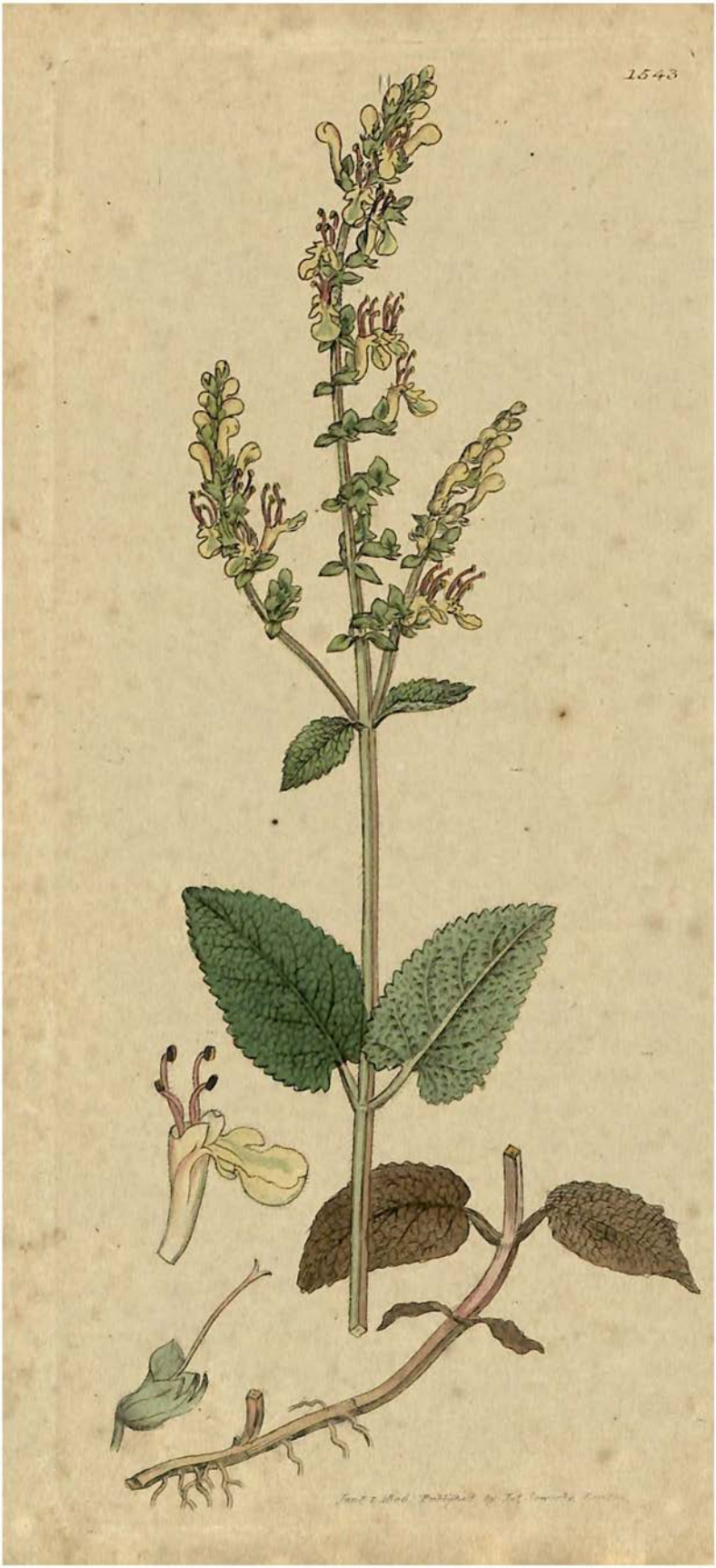
GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Leathery; ash-coloured and even above; whitish, smooth, with indistinct pale veins beneath. Shields anterior, ascending, roundish, dark reddish brown.

SYN. Lichen spurius. *Ach. Prod.* 159.
Peltidea spuria. *Ach. Meth.* 283. *t.* 5. *f.* 2.

MR. BORRER found this Lichen on thatch at Hurst-pierrepoint, Sussex, in July last, and communicated specimens to us, which agree with those of Dr. Acharius. Mr. Turner met with it the preceding year on hedge banks at Gorleston, Suffolk.

It is most nearly related to *L. venosus*, *t.* 887; but differs in several particulars from that species. The fronds are more oblong than round; their upper surface greyish or ash-coloured, when young and moist assuming more or less of a glaucous green hue, but never a grass green. Beneath they are of a pale brownish white, destitute of fibres or radicles, but marked with longitudinal veins almost of the same colour, and projecting very little from the surface. The shields are sessile on the surface of elongated portions of the frond, roundish, elliptical, or kidney-shaped, of a dark reddish brown, more red when young.



TEUCRIUM Scorodonia.

Wood Germander, or Wood Sage.

DIDYNAMIA Gymnospermia.

GEN. CHAR. Upper lip of the *corolla* divided down below its base and divaricated. *Stam.* projecting above it.

SPEC. CHAR. Leaves heart-shaped, serrated, on footstalks. Stem erect. Flowers leaning to one side, in lateral and terminal clusters.

SYN. Teucrium Scorodonia. *Linn. Sp. Pl.* 789. *Sm. Fl. Brit.* 606. *Huds.* 248. *With.* 518. *Hull.* 130. *Relh.* 224. *Sibth.* 180. *Abbot.* 125. *Curt. Lond. fasc. 5. t.* 40.

Scorodonia, seu Salvia agrestis. *Raii Syn.* 245. *Ger. em.* 662.

VERY plentiful in dry heathy places, about banks and copses, where its pale yellow blossoms with their purple projecting stamina are to be seen in abundance in July and August.

The roots are creeping and perennial. Stems erect, a foot or two in height, leafy, square, harsh and hairy; bearing 1 terminal and several lateral simple clusters, or spikes, of opposite flowers, all which lean one way, and have a pair of ovate bracteæ at the base of their partial stalks. Leaves on footstalks, opposite, heart-shaped, serrated or sharply crenate, rough, rugged, of a darkish green.

The whole plant is bitter, somewhat viscid, with a strong scent like hops, which, like them, has sometimes a narcotic effect. It has been recommended as a substitute for hops in making beer, and we believe is one of the most wholesome that can be used, being at least as harmless to the nerves as the plant whose place it is meant to supply, and superior to it in tonic qualities.

1544
876

SCROPHULARIA nodosa.

Knotty-rooted Figwort.

DIDYNAMIA Angiospermia.

GEN. CHAR. *Cal.* 5-cleft. *Cor.* somewhat globose, reversed. *Caps.* superior, 2-celled.

SPEC. CHAR. Leaves heart-shaped, acute, with three ribs at the base. Stem sharp-edged.

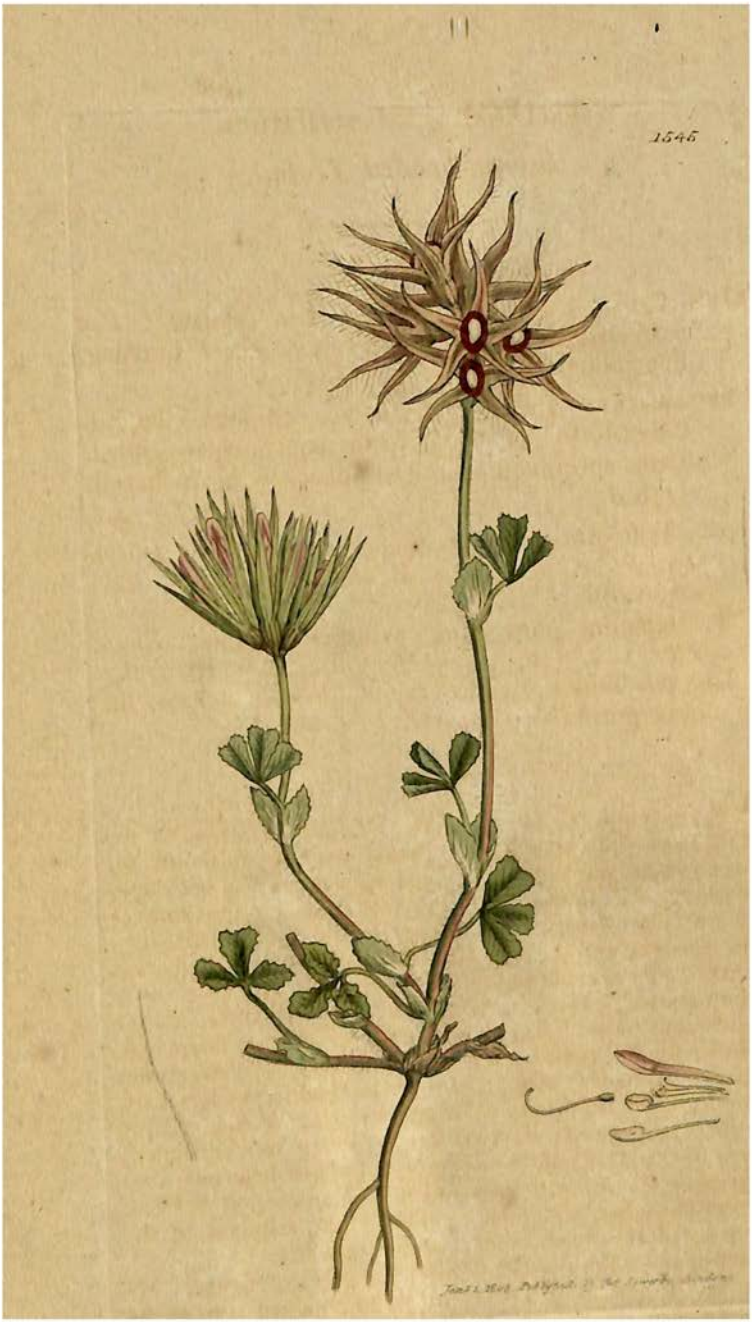
SYN. Scrophularia nodosa. *Linn. Sp. Pl.* 863. *Sm. Fl. Brit.* 663. *Huds.* 274. *With.* 553. *Hull.* 138. *Relh.* 246. *Sibth.* 196. *Abbot.* 138.

S. major. *Raii Syn.* *283. *Ger. em.* 716.

COMMON in shady rather dry places, about hedge bottoms and in groves, flowering in July and August.

Root perennial, whitish, thick and tuberous, beset with little knobs. Stem 2 or 3 feet high, upright, simple, leafy, furnished with 4 sharp angles, smooth. Leaves opposite, on footstalks, heart-shaped, acute, serrated, smooth, of a shining dark green above, paler beneath, veiny, with one principal rib, and 2 smaller ones at the base which run a little way along the margin, affording an example of what Linnæus denominates "a leaf 3-nerved at the base." Flowerstalks axillary and terminal, forked, angular and glandular, each bearing a pair of lanceolate bracteæ, and all together combining to form a compound upright cluster. The calyx, as well as the summit of each flowerstalk, is smooth. Corolla dull green, with a livid purple lip. Capsule ovate and pointed, longer than in *S. aquatica*, *t.* 854.

Every part of the plant is very fœtid when bruised, resembling Elder in scent. It is reported to be good for scrophulous diseases, whence the generic name; but we are not certain how far the form of the root might suggest its use in glandular swellings. A medical botanist must always be on his guard against whim, superstition and quackery.



TRIFOLIUM stellatum.

Starry-headed Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. Spikes hairy, ovate. Stipulæ elliptical. Calyx-teeth spreading, leafy, equal, taper-pointed. Stems spreading. Leaflets inversely heart-shaped, toothed.

SYN. Trifolium stellatum. *Linn. Sp. Pl.* 1083. *Willd. Sp. Pl. v.* 3. 1373. *Bauh. Prod.* 143. *Ger. em.* 1208.

T. stellatum purpureum monspessulanum. *Bauh. Hist. v.* 2. 376. *f.* 2. *Moris. sect.* 2. *t.* 13. *f.* 9.

Lagopus minor erectus, capite globoso stellato, floribus purpureis. *Barrel. Ic. t.* 860.

WE are happy to add the real *Trifolium stellatum* to the list of British plants. *T. maritimum* was long mistaken for it, see *t.* 220, nor did any botanist suspect we had both species till Mr. W. Borrer found the *stellatum*, on the 30th of July 1804, growing in great plenty between Shoreham harbour, Sussex, and the sea. The two plants are by far too different to be ever confounded again.

Root annual. Herb varying much in luxuriance, always considerably hairy. Stems spreading or diffuse, branched, clothed with soft horizontal hairs. Leaflets obcordate, somewhat wedge-shaped, abrupt, acutely toothed in the fore part, strongly ribbed. Flowers in round or ovate heads. Calyx very hairy, furrowed; its teeth long and very much pointed, all regular and equal, becoming leafy and enlarged after flowering. Its orifice is surrounded with an elegant red and white circle when about half grown. The standard of the corolla is red; the other petals pale red or white.

Gerarde describes this plant well, but gives no figure. He saw it in the garden of Tradescant, who obtained it from the Mediterranean.

INULA Helenium.

Elecampane.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* nearly naked. *Down* simple. *Cal.* imbricated. *Florets* of the radius very numerous, linear. *Antheræ* with 2 bristles at the base.

SPEC. CHAR. Leaves clasping the stem, ovate, rugged, downy beneath. Scales of the calyx ovate.

SYN. Inula Helenium. *Linn. Sp. Pl.* 1236. *Sm. Fl. Brit.* 891. *Huds.* 368. *With.* 730. *Hull.* 185. *Relh.* 330. *Sibth.* 255. *Abbot.* 183. *Woodv. Med. Bot. t.* 108.
Helenium. *Raii Syn.* 176.

THE wild specimen figured in our plate was gathered at Limpenhoe, Norfolk, by the Rev. George Reading Leathes, F. L. S. in the latter end of August. The Elecampane grows in moist rich pastures and meadows in several parts of England, but is not common. In gardens it used to be more cultivated than at present, for the sake of its root, which is perennial, large and fleshy, abounding with mucilage, combined with an aromatic bitter flavour, and some acrimony. These qualities render it useful to promote expectoration. In Germany it is said to be frequently candied, and taken as a stomachic.

The stems are a yard high or more, thick, furrowed, leafy, downy, branched above. Leaves large, ovate, slightly serrated, veiny, most downy and white beneath; the radical ones on stalks; the rest clasping the stem. Flowers large, terminal, solitary, of a fine golden yellow. Calyx-scales broad, leafy, veiny, entire; the inner ones narrow. Radius composed of a multitude of linear spreading florets; the disk of still more numerous tubular ones. Seeds quadrangular, smooth. Down roughish. Receptacle not quite smooth.

June 1 1805 Published by Sir Stamford Raffles

OPHRYS corallorhiza.

Coral-rooted Ophrys.

GYNANDRIA Diandria.

GEN. CHAR. *Nectary* consisting of a lip only, slightly carinated at the back.

SPEC. CHAR. Root branched, fleshy, zigzag, divaricated. Stem sheathed, without leaves. Lip of the nectary slightly three-lobed.

SYN. Ophrys corallorhiza. *Linn. Sp. Pl.* 1339. *Sm. Fl. Brit.* 932. *Huds.* 388. *With.* 32. *Hull.* 196. *Lightf.* 523. *t.* 23. *Fl. Dan. t.* 451.
Corallorrhiza n. 1301. *Hall. Hist. v.* 2. 159. *t.* 44.
Cymbidium corallorrhizon. *Swartz. Act. Holm. ann.* 1800. 238.
Dentaria minor. *Ger. em.* 1585.

LIGHTFOOT, who first made this known as a British species, saw it only in one place, and there sparingly; "in a moist hanging wood, on the south side, near the head of Little Loch Broom, on the western coast of Ross-shire." We know not that any person has since met with it, till Mr. Thomas Bishop, to whom we are obliged for fresh specimens, found it in small quantities, in 1804 and 1805, in Methven wood 6 miles from Perth. It has not been observed in England, Wales or Ireland, though surely to be expected in the boggy alpine woods of the last-mentioned country. It is perennial, and flowers in July.

The root differs greatly from all other British plants of this family, being very much branched and divaricated, whitish, fleshy, somewhat downy. The stem is about a span high, simple, clothed with 2 or 3 alternate, cylindrical, greenish, swelling sheaths, which supply the place of leaves. Spike terminal, of a few flowers, each of which has a minute bractea at the base of its little stalk. Petals lanceolate, acute, white with a green rib; 3 of them erect; 2 spreading and curved downward. Lip ovate, furrowed, as long as the petals, slightly notched on each side, in which last particular the description in *Fl. Brit.* requires correction. The lid of the stamina is vertical and moveable.

1548

Jan.ʸ 1. 1805. Published by Jas. Sowerby, London.

OPHRYS ovata.

Common Twayblade.

GYNANDRIA Diandria.

GEN. CHAR. *Nectary* consisting of a lip only, slightly carinated at the back.

SPEC. CHAR. Root of clustered fleshy fibres. A pair of elliptical leaves on the stem. Nectary linear, two-lobed.

SYN. Ophrys ovata. *Linn. Sp. Pl.* 1340. *Sm. Fl. Brit.* 932. *Huds.* 388. *With.* 34. *Hull.* 196. *Relh.* 347. *Sibth.* 12. *Abbot.* 195. *Curt. Lond. fasc.* 3. *t.* 60.
Epipactis ovata. *Swartz. Act. Holm. ann.* 1800. 232.
Bifolium majus, seu Ophris major quibusdam. *Raii Syn.* 385.

IN groves and pastures not unfrequent, flowering in June. Our specimen, gathered on the bushy hills above Matlock Bath, is rather smaller than the usual size of the plant in more moist situations.

The root is perennial, consisting of numerous simple fibres. Whole plant of a greenish cast. Stem a foot or 18 inches high, bearing about its middle a pair (rarely more) of sheathing, elliptical, ribbed, smooth leaves. Below these leaves the stem is angular and smooth, above them round and downy, terminating in a long, dense, upright spike of numerous green flowers, each on a partial stalk, with an acute bractea. Petals with a red or brown tinge, all concave, and directed rather upward. Lip long, pendent, yellowish green, linear, concave at the base, with a rib on the upper side, and ending in 2 rather spreading equal lobes. Column 2-lipped, the upper lip bearing the antheræ, which are brown, parallel, often falling out (as in our magnified figure), discharging two masses of yellow pollen which stick to the lower lip of the column, under which, on its other side, is the stigma. Very often these masses of pollen are scattered over other parts of the plant, as Dr. Scott and others have noticed in *Orchis bifolia*.

1549

2034

Lecidea expallens.

Jan.ʸ 1806. Published by the Linnean Society, London.

LICHEN orostheus.

Sulphureous Mountain Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust thin, powdery, spreading, pale greenish sulphur-coloured. Shields sessile, pale buff, with a powdery edge; at length convex, rugged, without a border.

SYN. Lichen orostheus. *Ach. Prod.* 38.
Lecidea orosthea. *Ach. Meth.* 72.

THIS Lichen has long been known in England under a name given to it by Mr. Dickson, but never published, *virescens*. Mr. Turner has found it on trees and pales in Norfolk, and Mr. W. Brunton on old trees near Rippon, Yorkshire. A specimen sent by Dr. Acharius on a bit of quartz rock, from that situation, as it should seem, has the crust interrupted, with a branched or fibrous appearance. There can, notwithstanding, be no doubt of the identity of his plant and ours.

In Mr. Brunton's specimens here delineated the crust is continued, widely spreading, thin, of an uniform pale sulphur-colour, a little greenish when wet, all over powdery. The shields are numerous, almost immersed in the powder of the crust, when young small, flat, of a very pale buff-colour, with a powdery margin of the colour and texture of the crust; when arrived at maturity the margin is obliterated, and the disk becomes somewhat enlarged, convex, rugged or lobed, with little or no change of colour. In an early state the shields are supported on short stalks, which are scarcely perceptible because of the powdery crust.

1550
2073

Lecidea lucida?

Tert. 1. 1812. Published by Jas. Sowerby, London.

LICHEN lucidus.

Lemon-coloured Rock Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.

Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust thin, powdery, brittle, pale greenish lemon-coloured. Shields small, sessile, convex, lemon-coloured, without a border.

SYN. Lichen lucidus. *Ach. Prod.* 39.

Lecidea lucida. *Ach. Meth.* 74.

THE crust of this Lichen, in scattered powdery patches of a bright light lemon-colour, without shields, attracted my attention on the hard sand-stone rocks in the country about Liverpool 2 years ago, especially at Woolton, Allerton, &c. After long search I met with 2 or 3 shields on the walls of Allerton hall, which determined its genus. Mr. W. Borrer has lately observed the same at Cuckfield, Sussex, as well as about Tunbridge wells, spreading over the perpendicular rocks, and having the appearance of a *Lepraria*. That gentleman has also found shields, and has communicated specimens to Mr. Sowerby. Although not furnished with correspondent ones from Dr. Acharius, I conceive there can be no doubt respecting his synonym.

The crust is more or less scattered, indeterminate, generally very thin, powdery, and easily rubbed off, of a beautiful pale lemon-colour, sometimes inclining to light green, and very obvious at a distance. It is less dense and continued, as well as of a very different hue from *L. orostheus*, of which Dr. Acharius at one time suspected this to be a variety; but he is now satisfied of the contrary. When the crust bears fructification, it is only on the older and more substantial parts. The shields are sessile, rather convex, of a full lemon-colour, without a border; when old, somewhat rugged or lobed.

1557
2403

Ulva lactuca

June 1 1808. Published by Jas. Sowerby, London.

ULVA Lactuca.

Green Laver, or Oyster Green.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

SPEC. CHAR. Membranous, pellucid, palmate, proliferous, bright green; its segments narrowest at their lower part.

SYN. Ulva Lactuca. *Linn. Sp. Pl.* 1632. *Huds.* 566. *With. v.* 4. 123. *Hull.* 311. *Lightf.* 970. *Relh.* 480. *Roth. Catalect.* 206.

U. marina, lactucæ similis. *Raii Syn.* 62.

Tremella marina vulgaris, lactucæ similis. *Dill. Musc.* 42. *t.* 8. *f.* 1.

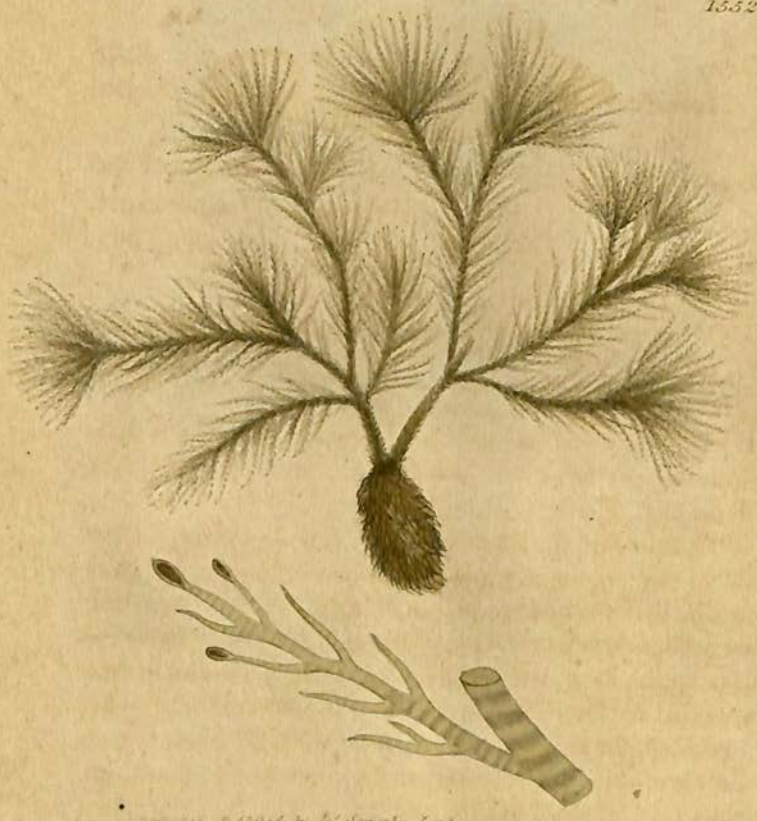
COMMON in the sea and about the mouths of large rivers, growing under water upon stones and shells. A supposed small variety is found in fresh water.

It is an annual plant, and bears its fructification in the autumn. The fronds generally grow in clusters, fixed by a round cartilaginous base, erect or spreading, simple, divided or proliferous, generally palmate, always dilated upwards and narrower towards the base. The texture of the whole is uniform, membranous, thin and tender; the colour an uniform, bright, shining, transparent green. There are no ribs nor veins. The seeds are equally diffused, and very minute.

This sea-weed has a salt and bitterish flavour like most of its tribe. It has within a few years been introduced to fashionable tables, being stewed with lemon juice. It is esteemed wholesome for scrophulous habits; but can scarcely be taken in sufficient quantities to do much good, without too strong an effect on the bowels.

55385

1552



Published by Sol Society London

CONFERVA scoparia.

Clustered Brown Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in round, solitary, closed tubercles, projecting from the frond, but united with it.

SPEC. CHAR. Olive brown, hairy, much branched and fasciculated. Ultimate divisions awlshaped, alternate.

SYN. Conferva scoparia. *Linn. Sp. Pl.* 1635. *Huds.* 595. *With. v.* 4. 131. *Hull.* 331. *Lightf.* 981.

C. marina pennata. *Dill. in Raii Syn.* 59. *Musc.* 24. *t.* 4. *f.* 23.

FREQUENT on the sea coast, growing under water upon shells and pebbles, with which it is thrown up on the beach at all seasons.

The colour of the whole plant is a dull olive brown, when old or dry verging towards a rusty hue. From a large hairy root or base spring many stems, 3 to 6 inches high, which are cylindrical, clothed with small entangled jointed fibres, so as to appear hairy, and much branched and subdivided in their upper part. Their ultimate branches are clustered, somewhat pectinated, the segments alternate, and tapering. Every branch and segment is closely but not very conspicuously jointed, the joints twice as broad as they are long.

In some specimens the tips of the youngest branches are obtuse, a little swelled, seeming to contain a brown substance in a pellucid membrane, and looking to the naked eye as if they had been burnt. We dare not assert this to be the fructification, which no botanist has hitherto described; but the same appearance is observable on the Linnæan specimens, as well as on those in our plate.

1563
2473.

Conferva enectorum?

Smith. Mss. Published by Jas. Sowerby, London.

CONFERVA ericetorum.

Purplish Heath Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in round, solitary, closed tubercles, projecting from the frond, but united with it.

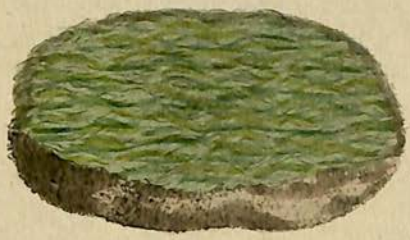
SPEC. CHAR. Dull purple. Filaments simple, slender, prostrate, closely entangled, scarcely contracted at the joints, which are about as long as they are broad.

SYN. Conferva ericetorum. *Dillw. Brit. Conf. t.* 1. *Roth. Fl. Germ. v.* 3. 507. *Catal. v.* 2. 206.

SENT from moist sandy heaths in the neighbourhood of Yarmouth by Mr. D. Turner, by whom it was first discovered in Britain and communicated to Mr. Dillwyn, the ingenious author of the *Synopsis of British Confervæ* above quoted. On the accuracy of those gentlemen, who have compared it with specimens from Dr. Roth its first describer, we may safely rely for his synonyms, which we have no opportunity of verifying.

The fibres are of a dull purple colour, closely entangled, unbranched, very fine and slender, growing prostrate on the moist sandy earth, which they cover in large patches, and when once observed may easily be known again by their colour, which does not partake of the green hue usual in plants of this genus. Under a high magnifier the joints appear about as long as they are broad, regular and uniform, most coloured in their centre, scarcely contracted, as far as we can perceive, at their points of union. Mr. Dillwyn observes that this species, though so long undescribed, is common on all the moist heaths that he has examined. The fructification is unknown.

1554
2522.



Lyngbya muralis.

CONFERVA muralis.

Green Wall Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in round, solitary, closed tubercles, projecting from the frond, but united with it.

SPEC. CHAR. Green. Filaments simple, very slender, prostrate, closely entangled, somewhat rigid. Joints very short, slightly swelled, with obsolete partitions.

SYN. Conferva muralis. *Dillw. Brit. Conf. t.* 6.

OF all vegetable productions this is perhaps one of the most common upon damp walls, stones, and especially neglected shady gravel walks. The dank areas in which the inhabitants of crowded cities gasp for air, become verdant in the wet months of winter with this Conferva, whose effects on the atmosphere may perhaps be as beneficial as those observed by Dr. Priestley in the species produced in corrupted water. Yet, notwithstanding its frequency, this plant seems to have escaped the mention of any writer before Mr. Dillwyn.

Its fibres are extremely slender, simple, twisted and entangled together, pressed to the soil, which they cover with a fine close green mat. Under a powerful magnifier they are seen to consist of joints much shorter than they are broad, either even or somewhat swelling, their partitions less conspicuous than in most other kinds. Mr. Dillwyn has remarked some of the joints to lose their green hue and become abruptly colourless. No fructification is known.

Buddle's observation, "This I find like green satin lying on gravel walks," which Dillenius, in *Raii Syn.* 56. *n.* 1., applies to *Byssus velutina,* (our *Conferva, t.* 1556.) agrees exactly with the plant above described.

Scytonema myochrous.

Fitch & Hodg. Published by Ad. Soverby, London.

CONFERVA myochrous.

Alpine Mouse-skin Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in round, solitary, closed tubercles, projecting from the frond, but united with it.

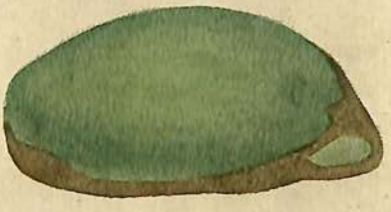
SPEC. CHAR. Brown. Filaments densely entangled, branched, scarcely jointed; the branches simple, in pairs, incurved, mostly leaning one way. Joints imperceptible.

SYN. Conferva myochrous. *Dillw. Brit. Conf. t.* 19.

TO Mr. Turner we are entirely obliged for our knowledge of this Conferva, as well as for the specimens we have drawn. He found it abundantly on stones in the alpine torrents of Snowdon, and in the vale of Beddgelert. He describes it as "matting the stones, often to a considerable extent, with a velvetty covering three or four lines in thickness, which, when taken out of the water, might aptly be compared to the skin of a mouse. Its colour was a dark glossy brown; its substance soft to the touch; its filaments so closely matted together, as to form almost an inseparable mass." Mr. Turner adds that the filaments were seldom more than half an inch long, and that he found no root. Some of them are simple, others branched, (as in our figure,) with pairs of simple incurved pointed branches, generally leaning one way. The branches and filaments are as "fine as the finest wool. There were in some specimens faint appearances of *septa*, but they were no where so evident as to warrant the inserting them in the figure." Such are the particulars communicated by Mr. Turner to Mr. Dillwyn.

Mr. Sowerby has found nothing like joints or septa, nor has any fructification been seen. The former only, in general, are our guide to the genus *Conferva*. In the present instance we have only a general similitude to assist us, but there is no reason to mistrust it.

1566
2535.



Protonema velutina.

Publ. 1 Oct. 1830 by Jas. Sowerby, London.

CONFERVA velutina.

Green Velvet Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in round, solitary, closed tubercles, projecting from the frond, but united with it.

SPEC. CHAR. Green. Filaments entangled, upright, very short and slender, somewhat rigid, alternately branched. Joints slightly swelling, twice as long as they are broad.

SYN. Byssus velutina. *Linn. Sp. Pl.* 1638. *Huds.* 605. *With. v.* 4. 144. *Hull.* 307. *Relh.* 475. *Sibth.* 338. *Abbot.* 276. *Lightf.* 1001.

B. tenerrima viridis, velutum referens. *Dill. in Raii Syn.* 56. *Musc.* 7. *t.* 1. *f.* 14.

MR. DILLWYN has with the greatest propriety referred *Byssus aurea*, see *t.* 212, to *Conferva*, on account of its jointed structure, of which, as far as we know, he is the first discoverer. Mr. J. D. Sowerby having detected the same structure in the plant before us, it must be removed to the same genus.

This plant covers the earth in moist shady places with a most beautiful fine green velvet carpet, diffusing a sweet fragrance like that of the *Jungermanniæ*, not only when growing, but for some time after it is dried in a herbarium. We have found it in summer as well as in winter, on shady moist, not marshy, banks in Yorkshire, Scotland, and other places. Mr. Borrer found it in Sussex in November. We do not however believe it to be so common as authors mention. Dillenius seems, by his quotation of Buddle in Ray's *Synopsis*, to have confounded our *C. muralis*, *t.* 1554, with this; and perhaps others have done so, as they speak of it as common, and yet do not notice its very remarkable scent. The two plants are notwithstanding widely different. *C. velutina* has upright, though very short and entangled, rigid, branched filaments; with cylindrical joints about twice or thrice as long as they are broad, and very little swelling.

Catabrosa aquatica

AIRA aquatica.

Water Hair-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, 2-flowered. *Cor.* of 2 valves. *Florets* without any imperfect one between them.

SPEC. CHAR. Panicle spreading. Flowers awnless, smooth, obtuse, longer than the calyx. Leaves flat.

SYN. Aira aquatica. *Linn. Sp. Pl.* 95. *Sm. Fl. Brit.* 84. *Huds.* 33. *With.* 135. *Hull.* 20. *Relh.* 28. *Sibth.* 38. *Abbot.* 15. *Curt. Lond. fasc.* 1. *t.* 5. *Knapp. t.* 29. *Ehrh. Cal.* 4.

Poa dulcis. *Salisb. Prod.* 20.

Gramen miliaceum aquaticum. *Raii Syn.* 402.

FREQUENT in ditches and about the margins of ponds and rivers, flowering in May or June.

The root is creeping, perennial, with long white shining fibres, throwing up very long, branched, leafy stems which float upon the water, their long flaccid linear leaves being, many of them, closely applied to its surface, as in *Poa fluitans*, *f.* 1520. The flowering part of the stem is erect, ending in a large, spreading, smooth, purple panicle, with a stoutish main stem, and numerous, unequal, slender, half-whorled branches. Calyx-leaves unequal, purple, much dilated upwards, notched or angular, one or both furnished with 3 ribs. Florets longer than the calyx, one of them on a stalk. Their glumes equal, obtuse; the outer ones 3-ribbed and somewhat plaited, smooth, beardless; the inner with 2 very prominent ribs or angles. Antheræ large, deep yellow. The flowers abound with honey.

A dwarf upright variety, not 3 inches high, was sent us from Park-gate, Cheshire, by the Rev. T. Gisborne.

1558

220.

PLANTAGO major.

Greater Plantain.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* 4-cleft. *Cor.* 4-cleft, inferior; its limb reflexed. *Stamina* very long. *Caps.* with 2 cells, bursting all round.

SPEC. CHAR. Leaves ovate, smoothish, somewhat toothed, with longish footstalks. Stalk round. Flowers imbricated. Seeds numerous.

SYN. Plantago major. *Linn. Sp. Pl.* 163. *Sm. Fl. Brit.* 182. *Huds.* 63. *With.* 195. *Hull.* 34. *Relh.* 59. *Sibth.* 56. *Abbot.* 30. *Curt. Lond. fasc.* 2. *t.* 11.

P. latifolia vulgaris. *Raii Syn.* 314. *n.* 1. 3 and 4.

FEW plants are more common than the Greater Plantain, in pastures, waste or cultivated ground, and even in places much trodden upon. It varies greatly in size according to the soil, and flowers at almost all seasons in mild weather.

Root perennial, consisting of numerous long fibres. Leaves radical, upright or spreading, on channelled, ribbed footstalks, (which vary in length, and are sometimes very long,) ovate, broad, more or less toothed or waved, nearly smooth, furnished with 7 or 9 ribs. Stalks several, longer than the leaves, erect, simple, round, smooth or downy. Spike long, slender, acute, of innumerable closely imbricated flowers. Corolla and filaments white. Antheræ incumbent, reddish. Style and stigma simple and downy. Capsule membranous, each cell containing several seeds, as Mr. Curtis very justly observes. The seeds are eaten by small birds, and are frequently given to those kept in cages. The juices of the plant are slightly astringent and mucilaginous, but no great dependance is at present placed on its healing powers.

...1558

221.

Plantago media.

PLANTAGO media.

Hoary Plantain.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* 4-cleft. *Cor.* 4-cleft, inferior; its limb reflexed. *Stamina* very long. *Caps.* with 2 cells, bursting all round.

SPEC. CHAR. Leaves ovate, downy, depressed, with very short footstalks. Stalk round. Spike cylindrical. Seeds solitary.

SYN. Plantago media. *Linn. Sp. Pl.* 163. *Sm. Fl. Brit.* 183. *Huds.* 63. *With.* 196. *Hull.* 34. *Relh.* 59. *Sibth.* 56. *Abbot.* 31. *Curt. Lond. fasc.* 4. *t.* 14.

P. major incana. *Raii Syn.* 314.

THIS is extremely common, and not unornamental on dry chalky hills and pastures, flowering throughout the summer. In lawns on a dry soil it is often a great nuisance, occupying much space, and leaving unpleasant vacancies when eradicated. The Rev. Mr. Watts of Ashill, who is possessed of one of the finest grass-plats in England, has found it worth while to apply a drop of oil of vitriol on the crown of each of the roots of this plant, to destroy it effectually.

The root is perennial, very large and woody. Leaves pressed close to the ground, ovate, about 5-ribbed, entire, downy and hoary, more or less blunt. Footstalks broad and short. Flowerstalks tall, hoary. Spike much thicker and shorter than in *P. major*. Filaments long, conspicuous for their pale purple, shining hue. Antheræ whitish, pointed. Seeds only one in each cell of the capsule.

Pubd 1 Mar. Published by Jas Sowerby, London.

STAPHYLEA pinnata.
Bladder-nut Tree.

PENTANDRIA Trigynia.

GEN. CHAR. *Cal.* inferior, in 5 segments. *Pet.* 5. *Capsules* inflated, joined together. *Seeds* 2, globose, with a scar on one side.

SPEC. CHAR. Leaves pinnated. Styles and capsules but two.

SYN. Staphylea pinnata. *Linn. Sp. Pl.* 386. *Sm. Fl. Brit.* 337. *Huds.* 131. *With.* 317. *Hull.* 65. *Ehrh. Arb.* 103.

Staphylodendron. *Raii Syn.* 468.

WE have drawn this from garden specimens. Parkinson observed it about Ashford in Kent, and Ray about Pontefract, Yorkshire; but the latter doubted its being really wild. Our accurate friend Mr. Hailstone, however, judges it to be truly indigenous in the last-mentioned county. It blossoms in May or June; and the fruit, for the singular appearance of which it is chiefly remarkable, is perfected rather late in autumn.

The stem is shrubby, branched and divaricated, five or six feet high. Leaves opposite, (not alternate,) pinnate, consisting of two pair, and an odd one, of ovate, smooth, serrated leaflets, accompanied by general and partial membranous stipulæ. Flowers in compound terminal bunches, yellowish, interspersed with narrow bracteæ. Capsules two, rarely 3, together, membranous and inflated, each containing two large, globular seeds, which when ripe are hard, light brown, and look as if varnished.

1561

594.

Saxifraga
Geum.

SAXIFRAGA Geum.

Kidney-leaved Saxifrage.

DECANDRIA Digynia.

GEN. CHAR. *Cal.* 5-cleft. *Petals* 5. *Caps.* with 2 beaks, 1 cell, and many *seeds.*

SPEC. CHAR. Leaves of a rounded kidney-shape, sharply toothed. Stem naked, panicled. Capsule superior.

SYN. Saxifraga Geum. *Linn. Sp. Pl.* 574.
Sedum montanum rotundifolium minus album non guttatum. *Moris. Hist. v.* 3. 478—no figure.
Sanicula montana minor. *Clus. Pann.* 441.

DISCOVERED by Mr. J. T. Mackay on a mountain near Dingle in the county of Kerry, Ireland, in September 1804. Roots brought from thence flowered the following June, and we are obliged to that gentleman and to Dr. Scott for specimens. The *Saxifraga umbrosa, v.* 10. *t.* 663, was long supposed a doubtful native of Ireland, nor had any one suspected that the *S. Geum* and *hirsuta* grew there too; yet Mr. Mackay has found these, and what may possibly prove another species. We hope in due time to elucidate them all, but at present must content ourselves with giving what is the real *S. Geum* of Linnæus, of which the above are conceived to be certain synonyms.

This differs from *S. umbrosa* in having rounded, somewhat kidney-shaped, hairy leaves, sharply toothed, by no means elongated at the base into a flat footstalk, but standing each on a longish, narrow, hairy footstalk. The flowerstalk is panicled, and clothed with red, glandular hairs. Petals cream-coloured, not sprinkled with yellow and red spots, but merely marked at the base with a purple line and yellow stain. The germen is superior, and calyx reflexed.

1362

Pubd 1 1816. Published by Jas Sowerby London.

ASPIDIUM aculeatum.

Common Prickly Shield-fern.

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* scattered, in roundish dots, not marginal. *Involucrum* umbilicated, bursting almost all round.

SPEC. CHAR. Frond bipinnate; leaflets ovate, somewhat crescent-shaped, fringed with spines, hairy beneath. Common stalks scaly.

SYN. Aspidium aculeatum. *Sm. Fl. Brit.* 1122.
Polypodium aculeatum. *Linn. Sp. Pl.* 1552. *Huds.* 459. *With.* 777. *Hull.* 239. *Relh.* 412. *Sibth.* 271. *Abbot.* 227. *Bolt. Fil.* 48. *t.* 26. *Mill. Illustr. t.* 101.
Filix mas non ramosa, pinnulis latis auriculatis spinosis. *Raii Syn.* 121. *n.* 2; also *n.* 4 and 5.

FREQUENT in shady stony places, and often in dry hedge bottoms, bearing seed in the summer and autumn.

Root perennial, tufted, large. Fronds numerous, large and handsome, of a dark and blueish green, paler beneath, lanceolate, acute, elegantly and closely bipinnate; their general and partial stalks remarkably scaly. Leaflets mostly alternate, ovate, a little curved into a crescent-shape, sharply serrated, each tooth tipped with a spine: all the leaflets are more or less lobed or dilated at their upper edge near the base, and sometimes the lowermost are pinnatifid. Spots of seeds scattered over the disk, their membranous coverings quite circular, attached by the centre, perfectly entire, not, as in most of the genus, cloven on one side.

The size of the plant is much diminished when it meets with a very dry or barren soil, in which case it approaches *Aspidium Lonchitis* in habit, but is a very distinct species. See *t.* 797.

1563

1416.

Aspidium Lobatum.

Pub.d 1.1806. Published by Jas Sowerby, London.

ASPIDIUM lobatum.

Close-leaved Prickly Shield-fern.

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* scattered, in roundish dots, not marginal. *Involucrum* umbilicated, bursting almost all round.

SPEC. CHAR. Frond bipinnate; leaflets elliptical, somewhat crescent-shaped, fringed with spines, hairy beneath: the foremost of the lowest pair very large. Common stalk scaly.

SYN. Aspidium lobatum. *Sm. Fl. Brit.* 1123.
Polypodium lobatum. *Huds.* 459.
Filix aculeata major, pinnulis auriculatis crebrioribus, foliis integris angustioribus. *Raii Syn.* 121.
F. aculeata, Lonchitidis æmula nostras. *Pluk. Phyt. t.* 180. *f.* 3.

SINCE Ray, whose description is excellent, we believe no one has well understood this fern except Mr. Edward Forster, to whom we are obliged for directing our attention particularly to the subject. It has not been observed out of Essex, where it is not uncommon in shady places under hedges. It varies in size, but often equals *A. aculeatum* in the height of its fronds, though their breadth is always less in proportion. The whole frond is more firm and rigid, of a paler and more shining green. The leaflets are rather elliptical than ovate, crowded, less cut or lobed, but more remarkable for the great size of the foremost or uppermost one at the base of each subdivision of the frond, which often extends its point beyond the stalk above it.

Adiantum Capillus Veneris.

Pubd 1 1808 Published by Jas Sowerby London

ADIANTUM Capillus Veneris.

True Maidenhair.

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* in roundish, marginal, distinct dots. *Involucra* like scales, from the margin of the frond turned in, distinct, opening inwards.

SPEC. CHAR. Frond doubly compound; leaflets alternate, stalked, wedge-shaped, lobed.

SYN. Adiantum Capillus Veneris. *Linn. Sp. Pl.* 1558. *Sm. Fl. Brit.* 1138. *Huds.* 460. *With.* 781. *Hull.* 243. *Lightf.* 679. *Bolt. Fil.* 24. *t.* 29. *Dicks. H. Sicc. fasc.* 6. 16.

Capillus Veneris verus. *Dill. in Raii Syn.* 123.

THIS rare and most elegant fern was gathered in the south islands of Arran near Galloway last October by Mr. J. T. Mackay. We are indebted to that gentleman, and to Dr. Scott of Dublin, for fine wild specimens.

Nothing can be more beautiful than this *Adiantum* when growing among trickling rills in the crevices of shady rocks, which it overhangs in the most graceful manner. The roots are perennial, fibrous, tufted and shaggy. Stalks from 6 to 12 or 15 inches high, slender, smooth, of a purplish shining black. Branches alternate, capillary, of the same colour. Leaflets alternate, wedge- or fan-shaped, smooth, thin, veiny, dilated upwards and unequally lobed, their summits turned back, as it were, in the form of brown scales, each of which covers a small congeries of capsules.

HYPNUM dendroides.

Tree-shaped Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem erect, simple. Branches clustered, terminal. Leaves ovate, single-ribbed, finely serrated. Lid pointed. Capsules erect.

SYN. Hypnum dendroides. *Linn. Sp. Pl.* 1593. *Sm. Fl. Brit.* 1283. *Huds.* 503. *With.* 859. *Hull.* 272. *Relh.* 430. *Abbot.* 250. *Dichs. Dr. Pl.* 96. *H. Sicc. fasc.* 13. 21. *Ehrh. Crypt.* 16. *Turn. Musc. Hib.* 138.

H. dendroides sericeum, setis et capsulis longioribus erectis. *Dill. Musc.* 313. *t.* 40. *f.* 48.

H. erectum, arbusculam referens, ramulis subrotundis confertim nascentibus. *Raii Syn.* 81.

FOUND in moist shady woods and boggy grassy pastures, producing its fruit, though very rarely, in spring, summer, or autumn. Mr. Mackay gathered our specimens on the island of Innesfallen, Killarney, in August 1805, at which time some capsules were quite ripe, others just beginning to swell.

The species before us is readily known by its tree-like form of growth, which gives it a pretty and peculiar aspect. The roots are long and creeping. Stems solitary, simple and scaly. Branches clustered, cylindrical, straight, acute, covered with imbricated shining leaves, which vary in colour, and are ovate, rather minutely serrated, furnished with a rib and 2 longitudinal plaits. Sheath cylindrical. Capsules erect, slenderly elliptical. Lid conical, pointed. Inner fringe divided almost to the base into uniform slender teeth: hence Swartz has referred it to *Neckera*; and his opinion is sanctioned by the colour and texture of the part in question.

1566

Drawn & Publ. Published by Jas. Sowerby, London.

HYPNUM curvatum.

Curve-branched Bushy Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem creeping. Branches clustered, incurved. Leaves elliptical, concave, entire, single-ribbed. Lid tapering. Capsule erect.

SYN. Hypnum curvatum. *Swartz. Musc. Suec.* 64. *Sm. Fl. Brit.* 1284. *Dicks. Crypt. fasc.* 4. 18. *Turn. Musc. Hib.* 139.

H. myosuroides. *Hedw. Sp. Musc.* 266. *Crypt. v.* 4. 20. *t.* 8. *Huds.* 508, β.

H. myosuron. *With.* 865. *Hull.* 274.

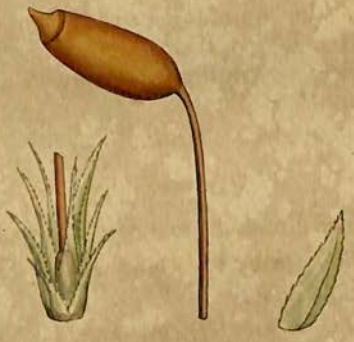
H. myosuroides crassius, capsulis erectis. *Dill. Musc.* 316. *t.* 41. *f.* 50.

H. repens, triangularibus angustis foliis, ramulis subrotundis. *Dill. in Raii Syn.* 83.

VERY frequent on the trunks of trees, more particularly in the dry woods of limestone countries, where it fructifies plentifully in the spring and summer months.

The stems are perennial, creeping, entangled, elastic and wiry, throwing up numerous, simple or divided, more or less clustered, cylindrical, acute branches, which are also rigid and elastic, always in some degree curved. The leaves are imbricated, concave and turgid, elliptical, entire, sharpish, single-ribbed at the base, of a pale, shining, but not a cheerful, green. Sheath yellowish. Fruit-stalk tawny or reddish, scarcely an inch long. Capsule always upright, ovate, small, tawny. Lid conical, tapering, acute, a little curved.

The real *H. myosuroides* is a smaller plant, with serrated leaves, and a less upright capsule.



March 1. 1806. Published by Jas. Sowerby, London.

HYPNUM myosuroides.

Mouse-tail Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem creeping. Branches clustered, incurved. Leaves lanceolate, pointed, serrated, single-ribbed. Capsule drooping as it ripens.

SYN. Hypnum myosuroides. *Linn. Sp. Pl.* 1596. *Sm. Fl. Brit.* 1285. *Huds.* 507. *With.* 865. *Hull.* 274. *Relh.* 431. *Abbot.* 251. *Turn. Musc. Hib.* 140.

H. myosuroides tenuius, capsulis nutantibus. *Dill. Musc.* 317. *t.* 41. *f.* 51.

H. polyanthon, triangularibus angustis foliis. *Dill. in Raii Syn.* 83.

Leskia myosuroides. *Sibth.* 303.

PLENTIFUL on limestone rocks in mountainous countries, bearing fruit in the spring and summer. Mr. Turner gathered our specimen in Anglesea.

This species differs from *H. curvatum*, *t.* 1566, in not being above half so large, and in having narrower and less concave leaves, which are finely serrated. The capsules moreover are, when they begin to ripen, no longer perfectly erect, as in the foregoing, but become inclined or drooping; insomuch that the close affinity of these two species in habit and general structure can alone justify us in placing the present in that section of its genus distinguished by upright capsules. It must however be remarked that these capsules droop only by a bend in their stalks, and are not of themselves arcuate or incurved. The lid is shorter than in *H. curvatum*, and a little bent.

March 1, 1806. Published by Jas Sowerby, London.

HYPNUM velutinum.

Velvet Feather-Moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem creeping. Leaves imbricated every way, ovate, pointed, serrated, single-ribbed in their lower part. Capsule ovate, drooping. Lid conical.

SYN. Hypnum velutinum. *Linn. Sp. Pl.* 1595. *Sm. Fl. Brit.* 1305. *Hedw. Sp. Musc.* 272. *Crypt. v.* 4. 70. *t.* 27. *Huds.* 506. *With.* 866. *Hull.* 274. *Relh.* 437. *Sibth.* 301. *Abbot.* 251. *Turn. Musc. Hib.* 167.

H. velutinum, capsulis ovatis cernuis. *Dill. Musc.* 326. *t.* 42. *f.* 61.

H. repens trichoides terrestre viridius minus, capitulis tumidioribus cernuis. *Raii Syn.* 84. *n.* 24.

COMMON on banks, and about the roots of trees in woods, forming dense entangled tufts and patches, and bearing ripe fruit in the early spring.

Stems creeping, perennial, densely matted together, much branched. Branches short, erect, clustered, mostly simple, cylindrical, thickly clothed in every direction with imbricated upright little leaves of a yellowish lively green, which are ovate and single-ribbed at their base, tapering into a long serrated nerveless point. Sheath of several slender pale tapering leaves without nerves. Fruitstalk about an inch long, purplish, often rough towards the top with very minute tubercles. Capsule ovate, short, curved and drooping, of a rusty brown when ripe. Lid conical, acute, reddish. Veil greenish.

Ray's No. 25 should seem to be only a slight variety of the above.

HYPNUM commutatum.

Larger Curled Fern Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem procumbent, pectinated. Leaves ovate, pointed, curled, ribbed almost to the extremity, beardless. Lid convex, pointed.

SYN. Hypnum commutatum. *Hedw. Sp. Musc.* 284. *Crypt. v.* 4. 68. *t.* 26. *Sm. Fl. Brit.* 1333. *Turn. Musc. Hib.* 196.

H. repentis filicini crispi varietas B, C, D. *Dill. Musc.* 283. *t.* 36. *f.* 19, B—D.

THIS elegant moss grows in watery and marshy places on a calcareous soil. At Hackfall in Yorkshire, from whence the Rev. Mr. Dalton communicated our specimens, it is plentiful, and frequently bears fruit in April and May.

The stems are perennial, from 4 to 8 inches or more in length, simple or divided, rusty, the ascending branches pinnated with a number of short hooked ones, all densely clothed with leaves, which are small, of a rich somewhat tawny green, not shining, curved towards one side, and always, whether wet or dry, curled and crisped. They are ovate, entire, long-pointed, beardless, furnished with a rib which disappears before it reaches the point, and marked with a few short ribs or plaits at their base. Sheath pale; its inner leaves long and striated. Fruitstalk an inch and half long, of a fine crimson and yellow. Capsule arcuate and drooping, nearly cylindrical, with a spreading mouth. Lid convex, scarcely conical, with a short straight point.

1570
1575.

Hypnum filicinum.

March 1. 1808. Published by Jas. Sowerby, London

HYPNUM filicinum.

Lesser Golden Fern Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem procumbent, imperfectly pectinated. Leaves ovate, pointed, bearded, ribbed, curved to one side. Lid convex, pointed.

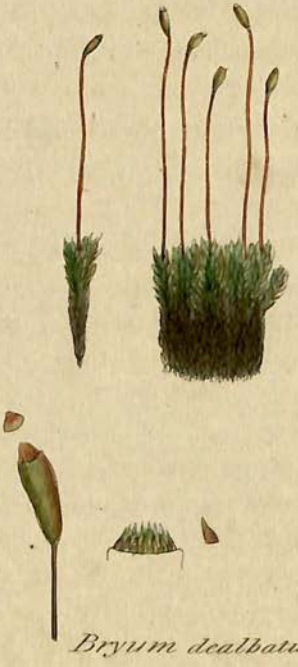
SYN. Hypnum filicinum. *Linn. Sp. Pl.* 1590. *Sm. Fl. Brit.* 1334. *Hedw. Sp. Musc.* 285. *t.* 76. *f.* 5—10. *Crypt. v.* 4. *t.* 26. *f.* A, B. *Huds.* 498. *With.* 854. *Hull.* 271. *Relh.* 433. *Sibth.* 294. *Abbot.* 247. *Turn. Musc. Hib.* 197.

H. repens filicinum crispum. *Dill. Musc.* 282. *t.* 36. *f.* 19, A, E, F. *Raii Syn.* 85.

EVEN Dillenius confounded this with the preceding, from which it differs in being rather smaller, less accurately pectinated, of a more golden or tawny hue, and its branches more densely clothed with rusty down. More precise differences are found on minute examination. The leaves of *H. filicinum* are furnished with a rib even to their points, and tipped with a minute hair. They are falcate, or curved to one side, in a wet as well as dry state, but in the latter only are they also curled or crisped. The fruitstalks are nearly two inches long, and proceed from the main stem. Capsule cylindrical, curved and drooping. Lid convex, with a small point.

This species is not rare in watery mountainous places, bearing fruit, though not universally, in April or May.

1571
1480.



Bryum dealbatum.

March 1 1806. Published by Jas Sowerby, London.

BRYUM dealbatum.

Pale-leaved Thread-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Outer fringe* of 16 teeth, broad at the base: *inner* a toothed membrane. *Flowers* terminal. *Capsule* ovate-oblong, smooth. *Veil* smooth.

SPEC. CHAR. Stem very short, simple. Leaves lanceolate, reticulated, obscurely serrated at the point. Capsule obovate, inclining.

SYN. Bryum dealbatum. *Sm. Fl. Brit.* 1350. *Dicks. Crypt. fasc.* 2. 8. *t.* 5. *f.* 3. *With.* 816. *Hull.* 258. *Don. Herb. fasc.* 4. 99.

Meesia dealbata. *Swartz. Musc. Suec.* 44. 94. *t.* 5. *f.* 10. *Hedw. Sp. Musc.* 174. *t.* 41. *f.* 6—9.

COMMUNICATED by our very intelligent and indefatigable friend Mr. G. Don from a marshy spot in the King's Park, Edinburgh. It bears its capsules in the spring and summer, and is presumed to be perennial. Mr. Crowe gathered the same on sandy turfy ground at St. Faith's near Norwich.

It is known by the pale whitish hue of its leaves. The stems are short and simple. Leaves pellucid, of a membranous appearance, reticulated with rather coarse veins, lanceolate, acute, single-ribbed, very obscurely serrated near the point only. Fruitstalk solitary, an inch and half high, terminal, erect, red, rather wavy. Capsule inclining, particularly when dry, pear-shaped with a contracted base, curved, obtuse, brown, opaque, not polished. Lid convex, almost hemispherical. Outer fringe short, reddish; inner twice as long, yellowish, formed of 16 teeth united by a reticulated base.

1572
1494.

Bryum turbinatum.

March 1 1808. Published by J.E. Sowerby, London.

BRYUM turbinatum.

Pear-shaped Bog Thread-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Outer fringe* of 16 teeth, broad at the base: *inner* a toothed membrane. *Flowers* terminal. *Capsule* ovate-oblong, smooth. *Veil* smooth.

SPEC. CHAR. Stem branched. Leaves ovate, bearded, entire. Capsule pear-shaped, pendulous.

SYN. Bryum turbinatum. *Swartz. Musc. Suec.* 49. *Sm. Fl. Brit.* 1366.

B. triquetrum γ. *Huds.* 491.

B. palustre complicatum rubens, capsulis turbinatis pendulis. *Dill. Musc.* 406. *t.* 51. *f.* 74.

β. nitidum rubens, capitulis reflexis, foliis angustis pellucidis, cauliculis proliferis. *Dill. in Raii Syn.* 102.

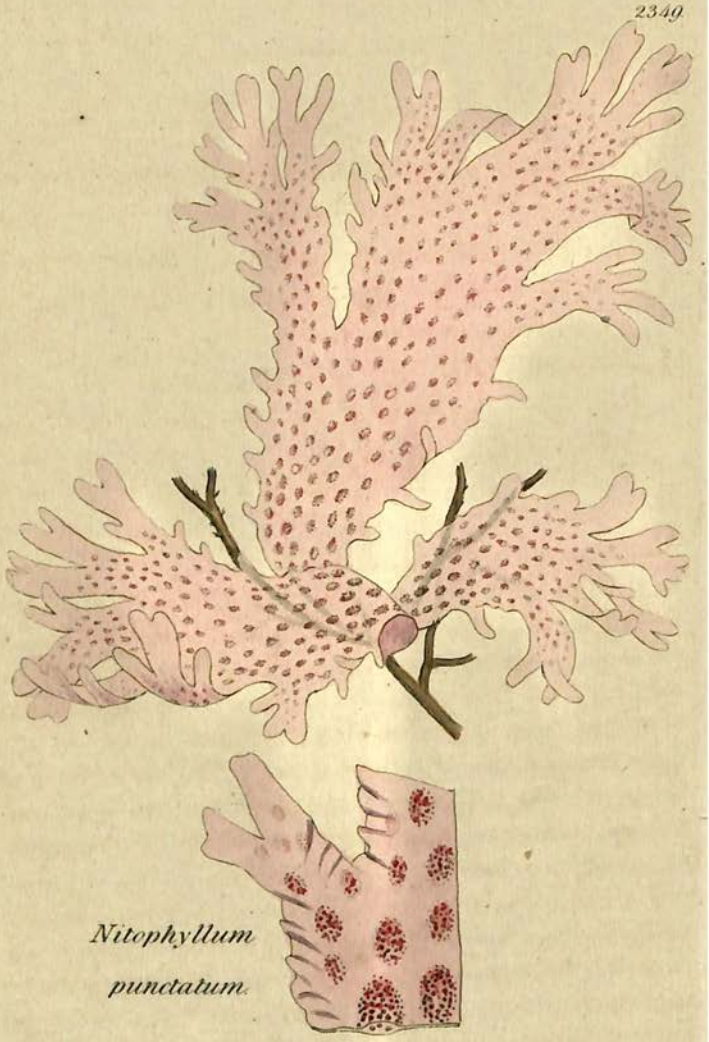
Mnium turbinatum. *Hedw. Sp. Musc.* 191. *Crypt. v.* 3. 22. *t.* 8.

M. nutans. *With.* 803. *Hull.* 255.

THIS seems to be a rare species. Dillenius mentions Shooter's hill and Wales as its stations. The Rev. Mr. Dalton finds it on Scotton banks near Knaresborough, and no where else. It bears fruit in spring and summer, and loves a wet sandy soil.

Stems about an inch high, perennial, branching, reddish. Leaves bright green, pellucid, reticulated, alternate, ovate, entire, with a strong rib ending in a small bristly point. Fruitstalk dark red, wavy, about an inch high. Capsule pendulous, pear-shaped, of a light shining brown when ripe. Lid convex, with a little point which is only perceptible in an early state. Fringe yellowish with a rusty hue.

1573
2349



Nitophyllum punctatum.

March 1. 1806. Published by Jas. Sowerby, London.

FUCUS punctatus.

Dotted Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond membranous, palmate, dichotomous, smooth: its segments obtuse. Fruit in scattered oblong patches.

SYN. Fucus punctatus. *With. v.* 4. 405.
Ulva punctata. *Stackh. Tr. of Linn. Soc. v.* 3. 236. *Hull.* 313.

WE have no hesitation in referring this beautiful sea-weed to *Fucus* rather than *Ulva*. Our much respected friend Mr. Stackhouse has candidly expressed his doubts on this point, or we should be much more cautious of going counter to his opinion. We have been more fortunate than that gentleman in the freshness of our specimens, gathered on the coast at Larne, Ireland, by Mr. Drummond, which show the true colour to be a delicate pale pink, with dark red seeds, and that the brown hue, when observable, arises from some degree of decay.

The root is affixed to some other marine vegetable. Fronds uniformly very thin and membranous, without rib or veins, palmate; the segments repeatedly forked, linear and obtuse; the margin growing waved with age. Seeds in elliptic-oblong, rather prominent, tubercles, half immersed in the frond, and scattered over all the broadest part of it.

1574
2377

Chylocladia articulata?

March 1 1806. Published by Jas. Sowerby, London

FUCUS articulatus.

Jointed Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond tubular, regularly contracted at intervals as if jointed, much branched: joints elliptical: branches forked and whorled.

SYN. Fucus articulatus. *Lightf.* 959. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 217. *Turn. Syn.* 383. *Stack. Ner.* 28. *t.* 8. *With. v.* 4. 90. *Hull.* 326.

Ulva articulata. *Huds.* 569.

Corallina lenta purpurea compressa. *Raii Syn.* 34.

GATHERED in full fructification in the summer, at Larne, in Ireland, by Mr. Drummond. Mr. Turner, in whose account of this species we can find nothing to correct or improve, mentions it as not uncommon on most parts of the British coast, particularly the southern and western counties.

The root is creeping. Fronds in large tufts, very much branched, sometimes whorled, of a red or purple hue, transparent, tubular, cylindrical, regularly contracted at intervals into elliptical apparent joints, but these are destitute (as Mr. Turner asserts) of *septa* or partitions, in which they totally differ from the articulations of a *Conferva*. Tubercles small, prominent, solitary on the sides of some of the joints, each filled with a mass of red seeds, which when ripe are sprinkled over the adjoining part of the branch; and hence Mr. Hudson, seeing the plant in that state, referred it to *Ulva*.

1373

54

Rhynchospora fusca.

Marsh. f. Woll. Pub. 1 Sept. by Jas. Sowerby, London.

SCHŒNUS fuscus.

Brown-headed Bog-rush.

TRIANDRIA Monogynia.

GEN. CHAR. *Glumes* chaffy, clustered; the outer ones barren. *Cor.* none. *Seed* 1, roundish, among the glumes.

SPEC. CHAR. Stem triangular, leafy. Flowers clustered. Leaves thread-shaped. Seed with three bristles at the base.

SYN. Schoenus fuscus. *Linn. Sp. Pl.* 1664. *Ehrh. Beitr. v.* 4. 154. *Phytoph.* 1. *Roth. Germ. v.* 2. 48. *Turn. and Dillw. Bot. Guide*, 753.

Cyperus minor angustifolius palustris, capitulis fuscis paleaceis. *Moris. sect.* 8. *t.* 11. *f.* 40? *Dill. in Raii Syn.* 427?

GATHERED very sparingly on a bog near Killarney, Ireland, by Mr. Mackay, in August 1805. The same had previously been found on Cromlyn bog, near Swansea, by Mr. E. Forster. We consider it as a very interesting, if not altogether a new, discovery. What the plant of Dillenius and Bobart may be, is not very clear from the figure above cited; still less can we tell what Hudson may have observed. In the *Fl. Brit.* this species is confounded with *S. albus*, *t.* 985, and we are obliged to those excellent observers *Ehrhart* and *Roth* for their true specific differences, as well as for specimens of *fuscus* which agree with those of Linnæus.

The whole plant is smaller, and the leaves narrower and more thread-shaped, than *S. albus*. The spikes are constantly of a shining reddish brown. But the most satisfactory marks exist in the parts of fructification. *S. fuscus* has 3 stamina, *albus* but 2; while *albus* has about 10 bristles at the base of the seed, *fuscus* but 3, alternate with the permanent stamina. The greater length of the style in the latter, indicated by Ehrhart, appears to us not so invariable, and perhaps may be different in different stages of its growth.

Rumex pulcher

March 1 1806. Published by [illegible] London.

RUMEX pulcher.

Fiddle Dock.

HEXANDRIA Trigynia.

GEN. CHAR. *Cal.* 3-leaved. *Petals* 3, closed. *Seed* 1, superior, naked, triangular. *Stigmas* many-cleft.

SPEC. CHAR. Valves toothed, one of them bearing a larger grain than the rest. Radical leaves fiddle-shaped. Stem smooth, straggling.

SYN. Rumex pulcher. *Linn. Sp. Pl.* 477. *Sm. Fl. Brit.* 393. *Huds.* 153. *With.* 356. *Hull.* 78. *Relh.* 143. *Abbot.* 82.

Lapathum pulchrum bononiense sinuatum. *Raii Syn.* 142.

FOUND in dry gravelly pastures and waste ground, flowering about August. The root is perennial.

The stems grow in a spreading straggling manner, partly procumbent, and are much branched, divaricated, striated, smooth to the touch. Radical leaves on long stalks, obtuse, slightly notched, contracted in the middle, so as to represent, more or less accurately, the form of a fiddle, or some sort of guitar; the stem-leaves are small, narrow, and undivided. The branches form long leafy clusters of green pendulous flowers, with yellow antheras. The enlarged petals (or valves of the fruit) are deeply and sharply toothed, each bearing an oblong reddish grain, which in one of them is commonly larger than in the rest. Seed acutely angular, smooth and polished.

Cucubalus baccifer.

March 1, 1806. Published by Jas Sowerby, London.

CUCUBALUS baccifer.

Berry-bearing Chickweed.

DECANDRIA Trigynia.

GEN. CHAR. *Cal.* of 1 leaf, inflated. *Petals 5*, with claws. *Berry* superior, of 1 cell, with many *seeds.*

SPEC. CHAR. . . . .

SYN. Cucubalus baccifer. *Gærtn. v.* 1. 376. *t.* 77. *f.* 7. *Sm. Fl. Brit.* 464.

C. bacciferus. *Linn. Sp. Pl.* 591. *Huds.* 185. *With.* 411. *Hull.* 97. *Dicks. H. Sicc. fasc.* 4. 9.

C. Plinii. *Dill. in Raii Syn.* 267.

COMMUNICATED by Mr. W. Borrer from his garden. We have never seen a wild specimen. Dillenius received it from Anglesea, and admitted it into his edition of Ray. The latter noticed it near Frankfort, and afterwards in Italy and the south of France; see his *Observations* 79, and his *Cat. Stirp.* 7, but has not mentioned it as a British plant. It grows in hedges, flowering in June and July, and is perennial. In autumn the black berries, so unusual in this natural order, by which it is distinguished from the genus *Silene*, are very remarkable. These are supposed to be poisonous, but we know not on what foundation.

The root creeps. The stems are weak and straggling, 2 or 3 feet long, much branched, forked, leafy, round, hollow, rough with deflexed hairs. Leaves opposite, on stalks, ovate, entire, downy. Flowers axillary and terminal, solitary, drooping, on downy stalks. Calyx large, bell-shaped, downy, thin, permanent. Petals greenish-white, cloven, generally more or less crowned, but in that respect they vary. Stamina inserted into the petals and the receptacle alternately. Berry stalked, globular, black and shining.

1378

J. Marsh del. et lith. Published by Jas. Sowerby, London.

SEDUM album.

White Stonecrop.

DECANDRIA Pentagynia.

GEN. CHAR. *Cal. 5*-cleft. *Petals 5*, with *5* nectariferous scales at the base of the germen. *Capsules 5.*

SPEC. CHAR. Leaves oblong, cylindrical, obtuse, spreading, smooth. Panicle much branched.

SYN. Sedum album. *Linn. Sp. Pl.* 619. *Sm. Fl. Brit.* 489. *Huds.* 196. *With.* 427. *Hull.* 99. *Relh.* 174. *Abbot.* 99. *Curt. Lond. fasc.* 1. *t.* 31.
S. minus teretifolium album. *Raii Syn.* 271.

ON walls about London in several places, also in some other parts of England either on walls or rocks, flowering in July, but it is not frequent.

Root fibrous, perennial. Stems 4 or 5 inches high, branched and weak at the bottom, round, leafy, smooth, often reddish. Leaves scattered, spreading, sessile, cylindrical, obtuse, smooth, extremely juicy, of a pale green inclining to glaucous, often tinged with red. Panicle cymose, terminal, much branched, smooth. Flowers white or pale red. Calyx obtuse, smooth. Antheras red. Nectariferous scales slightly notched.

For decorating ruins or rockwork this is a lively delicate-looking *Sedum*, but it is not one of those that thrive indiscriminately and without trouble in any situation. It requires some depth of soil, and a little support for its stems, which in such circumstances throw out roots and creep to some extent. It also likes a little moisture and shade.

1579

Sowerby del. Published by Jas. Sowerby, London

LYCHNIS dioica: *flore rubro.*
Red Campion.

DECANDRIA Pentagynia.

GEN. CHAR. *Cal.* of 1 leaf, oblong. *Petals 5*, with claws; their limb mostly divided. *Caps.* superior, opening with *5* teeth, of 1 or *5* cells.

SPEC. CHAR. Flowers dioecious. Fruit of one cell.

SYN. Lychnis dioica. *Linn. Sp. Pl. 626. Sm. Fl. Brit. 495. Huds. 199. With. 431. Abbot. 101.*

α. Flowers red.

L. dioica. *Curt. Lond. fasc. 2. t. 32. Hull. 100.*

L. diurna. *Sibth. 145. Sym. 112.*

L. sylvestris rubello flore. *Raii Syn. 339. Ger. em. 469.*

SOMETIMES it happens that plants which every one well knows at first sight, are attended with much difficulty in their botanical characters, as is the case with the common Red and White Campions, both comprehended by Linnæus under his *Lychnis dioica.* We shall endeavour to illustrate them in this and the following plate.

The Red Campion is common under hedges and in other shady and rather moist places, flowering copiously in the spring, and occasionally, when it has been accidentally cropped at an early period, its flowers are observable here and there throughout the summer. The root is perennial and tapering. Herb clothed with fine soft prominent hairs, and somewhat viscid. Stem upright but weak, round, jointed, leafy, about 18 inches or 2 feet high, terminating in a forked spreading panicle. Leaves ovate, soft, acute, entire. Flowers on partial stalks, with somewhat membranous bracteas. Calyx dark red; in the male flowers tubular; in the female (which are on distinct and stronger plants) ovate; in both 10-ribbed, without intermediate veins. Petals rose-coloured, with whitish claws and 4-cleft crown, the limb cloven, and sometimes having 2 slight lateral lobes. The flowers have no smell. They are often seen double in gardens. There is a pale variety in which the stamina and pistilla are sometimes, not always, together in the same flower.

LYCHNIS dioica: *flore albo.*

White Campion.

GEN. and SPEC. CHAR. See preceding page.

β. Flowers white. *Relh.* 177.

Lychnis dioica. *Fl. Dan. t.* 792.

L. vespertina. *Sibth.* 146. *Sym.* 112. *Hull.* 100.

L. sylvestris albo flore. *Raii Syn.* 339.

THIS variety, as it is presumed to be, of *Lychnis dioica* is no less common than the red one, but differs from it in place of growth, being found in rather more exposed situations, principally open fields, flowering in June and July. The whole plant is firmer and taller than the foregoing. Leaves rather more lanceolate than ovate, thicker and less flaccid. Flowers larger, white, sometimes pale blush-coloured, diffusing a delicate sweet fragrance in an evening or before rain, but we do not find them, according to Dr. Sibthorp's account, expanded more particularly at that time, for ours were gathered at noon; nor do the differences indicated by that indefatigable botanist in the shape of the fruit appear constant to us. We dissent from him and others, who have made 2 species of these plants, very unwillingly and with great diffidence. We have thought the intermediate veins between the calyx-ribs in the female flower of this white kind, might distinguish it from the red. The form of the crown of the petals seems a little different, but experience shows that to be variable. Both organs of fructification sometimes occur in the same flower in this variety also.

As we here publish two varieties of the same species, we have not repeated the characters. Otherwise we deem it essential, in all periodical publications of this kind, that each plant should be accompanied by its essential characters, both generic and specific, in order that the work may without inconvenience be bound up according to any arrangement whatever.

Apl 1 1806. Published by Jas. Sowerby, London.

CHELIDONIUM majus.

Celandine.

POLYANDRIA Monogynia.

GEN. CHAR. *Cal.* of 2 leaves. *Petals* 4. *Pod* superior, linear, of 2 valves and 1 cell. *Seeds* numerous, crested.

SPEC. CHAR. . . . . .

SYN. Chelidonium majus. *Linn. Sp. Pl.* 723. *Sm. Fl. Brit.* 563. *Huds.* 228. *With.* 483. *Hull.* 116. *Relh.* 204. *Sibth.* 164. *Abbot.* 115. *Woodv. Suppl. t.* 263.

Papaver corniculatum luteum, Chelidonia dictum. *Raii Syn.* 309.

ON rubbish in waste places the Celandine often occurs, but its natural station is on chalky rather shady banks, which its bright flowers, gaily contrasted with the glaucous leaves, greatly enliven in the months of May and June.

Root spindle-shaped, perennial. Herb brittle and tender, about 2 feet high, smooth or hairy. Leaves pinnated, smooth, rounded, lobed and notched. Flowers in umbels, on long axillary stalks. Calyx mostly a little hairy, soon falling off. Petals roundish, of a golden hue as well as the stamina. Pod rugged. Seeds black and shining with a white crest.

The other Linnæan species of *Chelidonium* being established as a genus (*Glaucium*), the present is the only one that remains. It is remarkable for the orange hue of its secreted fluids, which in the fig and spurge are white. According to an old Greek story, the swallows are supposed to restore the sight of their young, when blinded, with the juice of this herb. One would guess it more likely to have a contrary effect. Others have accounted for the name (from χελιδον a swallow) because it appeared and disappeared with those birds.

April 1. 1816. Published by Jas Sowerby, London.

GYMNOSTOMUM Donnianum.

Donnian Beardless-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* without a fringe. *Lid* deciduous. *Veil* separating entire from the base.

SPEC. CHAR. Stem none. Leaves bristle-shaped. Capsule turbinate, smooth. Lid oblique, the length of the capsule.

FOR the knowledge of this, one of the minutest of mosses, we are entirely obliged to Mr. G. Donn of Edinburgh, who first observed it in 1779, when he was a very young botanist, clothing the surface of a rock in the Den of Dupplin, Perthshire. He has repeatedly visited it in its native situation since, and found it in other parts of the same valley, but not in fructification. The season for the capsules is November, and the root is probably annual.

No stem is discernible. The leaves grow in either one or more clusters, nearly erect, bristle-shaped, beardless, sheathing one another at their base, of a full rich opaque green. Fruitstalk solitary, upright, capillary, yellowish, about a line high. Capsule erect, turbinate or topshaped, very minute, yellowish, opaque, quite smooth as if neatly turned out of box wood, tapering at the base, wide at the mouth, with the little column projecting in the centre as in several species of *Splachnum*. Fringe certainly none. Lid tapering, according to Mr. Donn, oblique, as long as the capsule.

The bristle-shaped leaves and long lid distinguish it from *G. Davallianum*, mentioned by Mr. Drake in the *Annals of Botany*, *v.* 1. 577, while the smooth and rounder capsule keeps it quite separate from *G. trichodes* of Mohr. It is indeed smaller than either of those species, and scarcely half the size of *Grimmia pusilla*, which at first sight it otherwise greatly resembles.

1583

GYMNOSTOMUM viridissimum.

Bright-green Branched Beardless-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* without a fringe. *Lid* deciduous. *Veil* separating entire from the base.

SPEC. CHAR. Stem branched, tufted. Leaves crowded, lanceolate, recurved. Capsule ovate, furrowed, erect. Lid awlshaped, curved.

SYN. Dicranum viridissimum. *Sm. Fl. Brit.* 1224. *Turn. Musc. Hib.* 71. *Turn. and Dillw. Botanist's Guide*, 728.

Bryum viridissimum. *Dicks. Crypt. fasc.* 4. 9. *t.* 10. *f.* 18.

GATHERED on trees near Ripon, Yorkshire, by Mr. W. Brunton junior, to whom we are obliged for the final determination of its genus, about which there has been some dispute. I could not at first trace out the origin of my own mistake in *Fl. Brit.*, but I find the account of the *peristomium* was communicated by a very excellent friend, not there mentioned, who has few errors to correct. In this intricate department some must be expected from the most careful investigator; and the difficulty of proving a negative renders the determination of a *Gymnostomum* peculiarly hazardous.

This moss seems by the *Botanist's Guide* to be not very uncommon. Possibly it may have been overlooked for *Orthotrichum crispum*.

The stems form level-topped tufts about an inch high, and are more or less branched, leafy, rusty in their lower part. Leaves crowded, spreading (close-pressed and twisted when dry), lanceolate, acute, beardless, entire, keeled, single-ribbed, of a fine opaque bright green, turning at length to a rusty brown. Fruitstalks brown, half an inch long. Capsule erect, ovate, brown, at length furrowed and somewhat cylindrical, with a narrow naked mouth. Lid awlshaped, rather shorter than the capsule.

1584
1524.

Hypnum populeum.

April 1. 1806. Published by Jas. Sowerby, London.

HYPNUM implexum.

Green Matted Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem creeping. Branches crowded, erect. Leaves lanceolate, pointed, finely serrated, single-ribbed. Lid conical.

SYN. Hypnum implexum. *Swartz. Act. Holm. ann.* 1795. 264. *Sm. Fl. Brit.* 1310. *Turn. Musc. Hib.* 173. *t.* 16.

H. plumosum. *Swartz. Musc. Suec.* 66.

COMMUNICATED by Mr. W. Brunton from stones near Ripon. It was originally noticed by Mr. G. Donn on a large stone near the foot of Ben Lawers, and afterwards in Angusshire. It has also been found in Ireland and near Newcastle. The capsules are ripened in the spring.

The colour varies from a pale yellowish green to a rather dark grass green, and is accompanied by a silky gloss, especially in a dry state. The stems creep over stones, bearing numerous short crowded upright cylindrical branches, which are thickly clothed with leaves, and seldom divided. The leaves spread every way, but slightly, and are lanceolate, long-pointed, concave at the base, finely serrated in the upper part, and furnished with a rib from the base to the summit. Fruitstalks little more than half an inch long, red, apparently smooth, but under a magnifier they are found to be finely granulated. Sheath of a few pale loose ovate pointed leaves. Capsule inclining, ovate, smooth, of a chesnut brown. Lid conical, with a sharp point.

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